EXCEL EXERCISES

EXERCISE 1.

- **Create the following spreadsheet**

	A	B	C	D	E	F
1		Basic Price	Discount	Sale Price	VAT	Selling Price
2						
3	Stereo	200				
4	Video	150				
5	TV	300				
6	Computer	700				
7	Fridge	500				
8	Toaster	45				
9	Kettle	34				
10	Dishwasher	700				
11	CD Player	1200				

- Enter a formula to calculate the discount on the Stereo. Remember to use cell references in your formula ! The discount is 10% of the Basic Price. *(Basic Price * 10%)*

- Calculate the Sale Price of the Stereo. *(Basic Price – Discount)*

- Calculate the VAT on the Stereo. *(Sale Price * 17.5%)*

- Calculate the Selling Price of the Stereo. *(Sale Price + VAT)*

- Select the calculated Discount on the Stereo, (C3) and copy it down for all the other items. Do the same for the Sale Price, VAT and Selling Price

When you've finished, save the spreadsheet as " DISCOUNT "

EXERCISE 2

You work in a furniture store. You have to create a spreadsheet to calculate the selling price of items which are discounted in the January Sale.

Set up the following spreadsheet.

	A	B	C	D	E	F
1		Basic Price	Discount	Sale Price	VAT	Selling Price
2						
3	Chair	200				
4	Desk	400				
5	Shelves	150				
6	Table	2000				
7	Stool	30				
8	Trolley	57				
9	Cabinet	200				
10	Sofa	4000				
11	Armchair	1100				

- In the cell C3, enter a formula to calculate the discount on the chair at 10% of the Basic Price.
- Copy this formula down to obtain all other discounts.
- In cell D3, subtract the Discount from the Basic Price to obtain the Sale Price, then copy this formula down to complete the column.
- Enter a formula in E3 to calculate VAT at 17.5% of the Sale price, then copy down.
- In cell F3 enter a formula to calculate the Selling Price by adding together the Sale Price and the VAT

When you've finished, save the spreadsheet as " PRICES "

EXERCISE 3

- Create the following spreadsheet.

	A	B	C	D	E	F	G
1		No. of Lines	Peak Units	STD Units	Fixed Charge	Cost of Peak	Cost of STD
2							
3	Reception	2	160	986			
4	Admin	4	700	456			
5	Sales	6	230	322			
6	Accounts	1	198	167			
7	Marketing	2	100	328			
8							
9	Total						

- Enter a formula to calculate the Fixed Charge for Reception. (No. of Lines * Subscription of £18)
- Enter a formula to calculate Cost of Peak for Reception *(Peak Units * £0.20 per / unit)*
- Calculate the Cost of STD *(Standard Units * £0.15)*
- Select the Fixed Charge, Peak Cost and STD Cost formulae for Reception and copy them down to the other departments.
- Use the **Autosum** button to calculate the total number of lines.
- Copy the function along so that all the columns are totalled.

When you've finished, save the spreadsheet as " PHONE "

Exercise 4

- Create the following spreadsheet shown below.

	A	B	C	D
1	Name	Hours	Rate	Salary
2				
3	Paul Graham	40	5	
4	John Thomson	30	4.5	
5	Robert Carlyle	35	3.75	
6	Ann Lenzie	41	4.5	
7	Louise Frank	37	4.2	
8				
9			Total Salary Paid	
10			Maximum Salary	
11			Average Salary	

- In D3 enter a formula to calculate the salary
- Fill in the remainder salaries by copying th formula down the column.
- Use functions to calculate the Total (SUM), the Maximum (MAX), and the average (AVERAGE).

When you've finished, save the spreadsheet as "RATE "

Exercise 5

- Create the following spreadsheet.

	A	B	C	D	E	F	G
1		1992	1993	1994	1995	1996	1997
2							
3	Sales	1750	1500	2000	2500	3250	4100
4	Costs						
5	Profit						
6							
7	Total Sales						
8	Average Profit						
9	Lowest Costs						

- Calculate the Costs for 1992 as 38% of Sales.
- Calculate the Profit for 1992
- Copy the Costs + Profit along to the other years.
- Use the appropriate functions to calculate the Total Sales, Average and Lowest Costs for the six year period.

When you've finished, save the spreadsheet as " Summary "

EXERCISE 6

- Create the following spreadsheet.

	A	B	C	D	E
1	Item	Cost	Discount	VAT	Price
2					
3	Table	250			
4	Chair	79			
5	Desk	150			
6	Drawers	200			
7	Wardrobe	375			
8					
9	CONSTANTS				
10	VAT rate	17.50%			
11	Discount	10%			
12	Delivery	£15			

- Use ABSOLUTE CELL REFERENCING to calculate the Discount on the Table.

- Use ABSOLUTE CELL REFERENCING to calculate the amount of VAT to be added to the cost of the Table. *(Cost * VAT rate)*

- Use ABSOLUTE CELL REFERENCING to calculate the price of the table. *(Cost – Discount) + VAT + Delivery*

When you've finished, save the spreadsheet as " STOCK "

EXERCISE 7

- Set up the spreadsheet below.

	A	B	C	D
1	City	Barrels	Spent	% of Total
2		(millions)	(£m)	
3				
4	Belfast	1.7		
5	Cardiff	2.1		
6	Edinburgh	2.4		
7	London	5.2		
8	Newcastle	4.7		
9				
10	TOTAL			
11				
12	Price per Barrel	150		

- In cell C4 enter a formula to calculate the amount spent in Belfast. Use Absolute Cell Referencing where needed !

- Copy this formula down.

- In B10 Enter a function to calculate the TOTAL BARRELS. Copy along to calculate TOTAL SPENT.

- In D4 work out the percentage of the TOTAL that was spent in Belfast. Copy formula down for other towns.

When you've finished, save spreadsheet as " BEER "

Exercise 8

- Create the following spreadsheet.

	A	B	C	D	E	F	G
1	ASSUMPTIONS						
2							
3	First Year's Sales	10000					
4	First Year's Costs	3500					
5							
6	Average Growth Rate	22%					
7	Average Inflation Rate	15%					
8	Average Tax Rate	25%					
9							
10	PROJECTION						
11		93/94	94/95	95/96	96/97	97/98	98/99
12	Sales						
13	Costs						
14	Gross Profit						
15	Tax						
16	Net Profit						

- Use Absoluting to copy the First Years Sales assumptions to the 93/94 position.
- Use Absoluting when calculating the 94/95 Sales Figure.
  *Previous Years Sales * Average Growth Rate + Previous Years Sales*
- Use Absoluting to copy the First Years Costs Assumption to the 93/94 Costs cell.
- Use Absoluting when calculating the 94/95 Costs.
  *Previous Years Costs * Average Inflation rate + Previous Years Costs*
- Calculate the Gross Profit for 93/94 and copy it to 94/95
  Sales – Costs
- Use Absoluting to calculate the Tax for 93/94. Copy it to 94/95
  *Gross Profit * Average Tax Rate*
- Calculate the Net Profit for 93/94
  Gross Profit – Tax
- Copy the 94/95 figures along for the other years.

When you've finished, save the spreadsheet as " PROJECT "

EXERCISE 9

- Create the following spreadsheet.

	A	B	C	D
1	ITEM	SELLING PRICE	UNITS SOLD	TOTAL SALES
2				
3	Training Shoes	79.99	150	
4	Track Suit	55.49	65	
5	Tennis Racquet	99.99	300	
6	Football	25.99	500	
7	Rugby Top	40	64	
8	Baseball Cap	9.99	500	

- Calculate Total Sales for Training Shoes and Copy the formula down.
- Widen the first column to accommodate item names. Do the same with the first row.
- Format the selling price as currency.
- Format the Total Sales with a comma separating the thousands.
- Make the item names **Bold** and change the font to Times New Roman.
- Increase the size of the column headings to 14pt and make the font blue.
- Make the background colour of the total sales figure yellow.
- Put a double border under the second row of column headings.

When you've finished, save the spreadsheet as " SPORTS "

EXERCISE 10

- Create the following spreadsheet.

	A	B	C	D	.....	M
1		January	February	March	.....	Dec
2	INCOME					
3	Sales	50000				
4	Other					
5	TOTAL					
6						
7	EXPENSES					
8	Wages	10000				
9	Salaries					
10	Rent					
11	Purchases	15000				
12	Heating					
13	Insurance					
14	Admin					
15	Distribution	3000				
16	TOTAL					
17						
18	OPENING BALANCE	6000				
19	CLOSING BALANCE					
20						
21	CONSTANTS					
22	Sales Growth	7%				
23	Purchases Growth	6%				
24	Wages Growth	4%				
25	Distribution Growth	8%				

- Prepare a cashflow using the following information.

Other Income = 5000 per month
Salaries = 4000 per month (rising to 4400 in June)
Rent = 4000 per quarter (payable first in March
Heating = 2000 per quarter (payable first in January)
Insurance = 1000 per annum (payable in July)
Administration = 2000 per month

- Using ABSOLUTE CELL REFERENCING calculate the Sales,Purchases, Wages and Distribution Growth for February

When you've finished, save the spreadsheet as " BALANCE "

EXERCISE 11

- Create the following spreadsheet.

	A	B	C	D
1	HOLIDAY	PRICE	DEPOSIT	BALANCE
2				
3	Greece	350		
4	Spain	249		
5	USA	360		
6	Egypt	480		
7				
8	DEPOSIT	12%		

- NAME the cell containing the deposit (12%) " Deposit "
- Use the name in a formula to calculate the deposit payable for the Greek Holiday. *(Price * Deposit)*
- Select the Greek Deposit and Balance and copy them down to the other holidays.
- Attach a note to the deposit Constant (12%) indicating that it is non-returnable.
- Protect the spreadsheet so that only the cells containing the prices can be altered.

When finished, save the exercise as " HOLIDAY "

EXERCISE 12

- Create the spreadsheet below

	A	B	C	D	E
1	Name	Target	Sales	Commision	Assessment
2					
3	Jane	14000	15000		
4	Ahmed	10000	8000		
5	Colin	18000	19000		
6	Paul	7000	6500		
7	Belinda	3900	12000		
8	Nel	12000	15000		
9	Sean	11000	2000		

- Use CONDITIONAL LOGIC to calculate Commision on the following basis:

  If a salesperson reaches target then they are paid 2% of Sales. Otherwise they are paid no commision.

- Use CONDITIONAL LOGIC to indicate Assessment on the following basis:

  If commision earned is greater than 200 then an assessment of "GOOD " is given.

Save the spreadsheet as " TARGET "

EXERCISE 13

- Name the first three sheets in your workbook " **Glasgow** ", " **Edinburgh** " and " **Totals** "

- **Link** the three sheets.

- Now create the following spreadsheet.....

	A	B	C	D
1	ITEM	No of Units	Price	TOTAL
2	Photocopier		2100	
3	Printer		500	
4	Fax		350	
5	PC		1200	

- Insert a formula to calculate the Total Sales figures for Photocopiers and then copy it down for the other items.

- **Unlink** the sheets.

- On the Glasgow sheet, insert figures to show sales of :

  12 Photocopiers
  25 Printers
  64 Fax machines
  18 PC's

- On the Edinburgh sheet insert figures to show sales of :

  9 Photocopiers
  20 Printers
  58 Fax machines
  10 PC's

- On the Totals sheet calculate the total number of Photocopiers sold. Copy it down for other items.

Save the WORKBOOK as " SALES "

EXERCISE 14

- Create the following spreadsheet.

	A	B	C	D
1	**Department**			
2				
3	MONTH	SALES	COSTS	PROFIT
4				
5	January			
6	February			
7	March			
8	April			
9	May			
10	June			
11	July			
12	August			
13	September			
14	October			
15	November			
16	December			

- Insert a formula in January's Profit. *(Sales - Costs)*
- Copy it down to the other months
- Save the spreadsheet as a TEMPLATE called "**Accounts** "
- Close the file and open it again.
- In B1 enter the Department as '**Book**' and insert the following data.

	A	B	C	D
1	**Department**			
2				
3	MONTH	SALES	COSTS	PROFIT
4				
5	January	1500	500	
6	February	1375	300	
7	March	1460	150	
8	April	1450	200	
9	May	1200	350	
10	June	1956	100	
11	July	1400	500	
12	August	1300	190	
13	September	1550	200	
14	October	1600	90	
15	November	1575	450	
16	December	1900	250	

- Save the file as " **Books** " , close it and open up " **Accounts** " again.

- This time the department is " **Music** ". Insert the data for it.

	A	B	C	D
1	**Department**			
2				
3	MONTH	SALES	COSTS	PROFIT
4				
5	January	900	110	
6	February	500	90	
7	March	550	55	
8	April	520	190	
9	May	610	75	
10	June	700	70	
11	July	870	60	
12	August	1020	55	
13	September	700	98	
14	October	600	120	
15	November	680	130	
16	December	1300	150	

- Save the spreadsheet as " **Music** "and close it down.

- Open up " **Book** "

- Open up " **Music** "

- Open up the template " **Accounts** "

- Arrange all 3 files so that you can see them. (*Window → Arrange*)

- In cell B1 of "**Accounts**" type SHOP TOTAL.

- In the SHOP TOTAL file use FILE LINKING to insert a formula to add the Sales figure from the Book Department to the Sales figure from the Music Department and copy it down. *remember to remove any absolute cell references..

- In the SHOP TOTAL file use File linking to add the Costs from both departments.

- Save the file as " **Shop**" and close all files.

EXERCISE 15 - CHARTS

- Create the following spreadsheet.

	A	B	C	D	E	F	G
1		1990	1991	1992	1993	1994	1995
2	SALES	10000	12000	15000	18000	17500	19000
3	COSTS	5000	8000	7500	8000	6000	8000
4	PROFIT						

- Insert a formula to calculate 1990's Profit and copy it along for the other years.

- Use the CHART WIZARD to create a graph showing Sales for the five year period.

- Use the CHART WIZARD to create another graph showing Profit for the five year period.

Save the file as " TREND "

Excel 5.0 for Windows 3.x Introduction

EXWI50/MS/CTC/SS
SM/0697/ISSUE8

Table of Contents

Chapter 1
Introduction to Windows 3.x *1*

What is Windows? 2

Using the Mouse 3

Exploring Windows 4

Launching Applications 7

Using Help 8

Chapter 2
The Excel Window *11*

The Spreadsheet Concept 12

The Screen Layout 13

Working with Toolbars and Menus 14

TipWizard 16

Moving Around the Worksheet 17

Moving Around the Workbook 19

Chapter 3
Creating a Worksheet *21*

Entering Data 22

Editing Data 24

Selecting Ranges of Cells 26

Entering a Range of Data 27

Erasing Data 28

The Undo/Redo Command 29

Chapter 4
Formulae *31*

Creating Formulae 32

Changing the Order of a Calculation 33

Chapter 5
File Procedures *35*

File Operations 36

Chapter 6
Moving and Copying Data 41

Moving Data 42

Copying Data 44

Using the Cell Handle 46

Chapter 7
Functions and Absolute References 49

Using Statistical Functions 50

Using AutoSum 53

Absolute Cell References 54

Conditional Logic 55

Chapter 8
Spreadsheet Presentation 57

Enhancing a Spreadsheet 58

Spell Checking Feature 69

Chapter 9
Printing 73

Viewing a Document 74

Page Setup 78

Defining Page Breaks 81

Defining Titles 82

Printing the Document 83

Setting Print Areas 84

Chapter 10
Using the Worksheet Efficiently 87

Naming Cells 88

Creating Cell Notes 91

Splitting a Worksheet Window into Panes 93

Protecting Worksheets 95

Chapter 11
Working with Multiple Sheets and Files *101*

Working with Multiple Worksheets 102

Creating Templates 109

Working with Multiple Workbooks 111

Chapter 12
Producing Charts *117*

Creating an Embedded Chart 118

Creating a Chart on a Separate Sheet 122

Formatting the Chart 123

Changing the 3-D View 129

Using the Drawing Tools 130

Editing Objects 131

Appendix A
Exercises *137*

Data Entry, Basic Formula and Copying 138

Using Statistical Functions 140

Using Absolute Cell Referencing 141

Building a Worksheet and Presentation 143

Conditional Logic 144

Creating a Template 146

Using Templates 147

Linking Workbooks 149

Linking Worksheets 150

Producing Charts 153

Chapter 1
Introduction to Windows 3.x

C·T·E·C

Topics

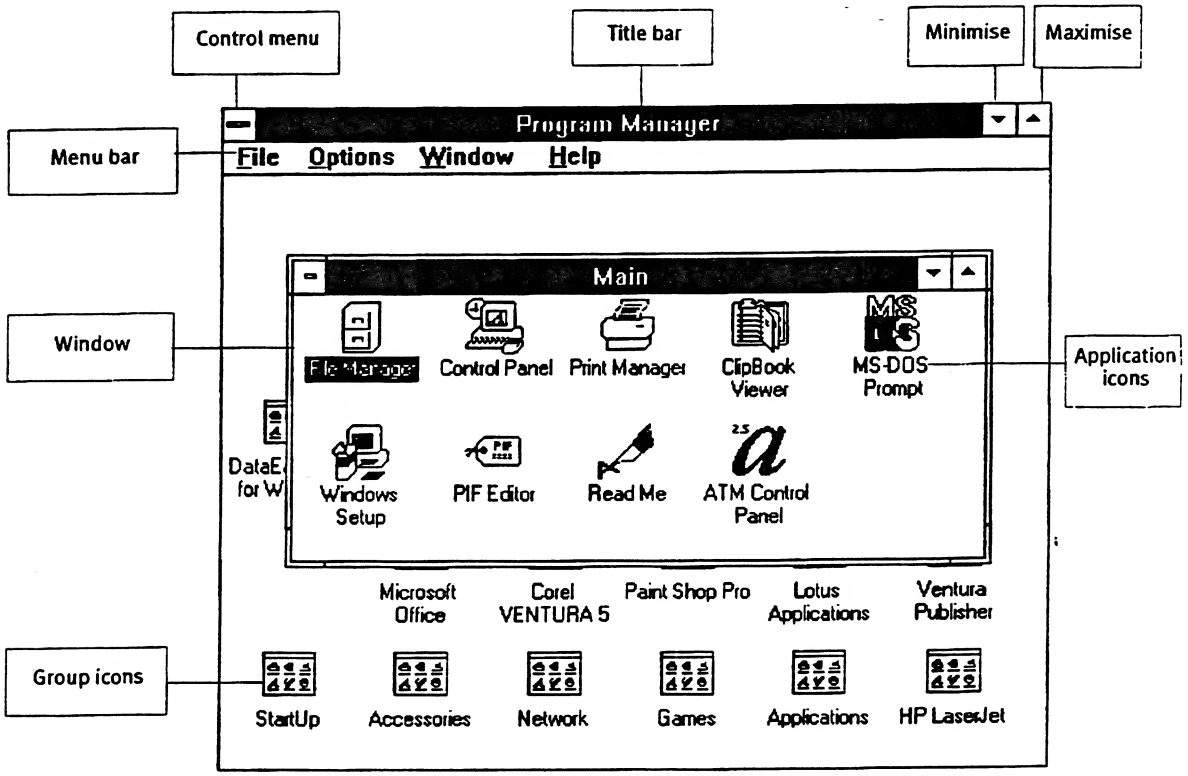
The following are covered in this chapter:

- ✓ What is Windows?
- ✓ Using the Mouse
- ✓ Exploring Windows
- ✓ Launching Applications
- ✓ Using Help

What is Windows?

Windows is a Graphical User Interface (G.U.I) providing a graphical interface between the user and the computer. One of the advantages of this is that the user is no longer faced with using complex commands to work with applications, but instead is presented with pictures which can be selected by using the mouse or keyboard. Another advantage is that a number of applications can run at the same time, and information can be exchanged between these applications.

The Windows Screen



Windows are working areas on the screen, and may contain a document (a letter, a spreadsheet, etc.) or icons (pictures representing applications or windows).

Initially, the Program Manager and Main windows are open. The Main window contains a number of Application Icons representing other unopened windows.

The Windows display can be tailored, so the user may find that the start-up screen illustrated differs from the one on their machine.

© CTEC

Using the Mouse

To select items in Windows, either the mouse or the keyboard can be used. The mouse enables the user to control the movement of a pointer on the screen. The pointer normally takes the shape of an arrow or flashing insertion point. In Windows, the left mouse button is used for most operations.

Action	Description
Single-click	Keep the mouse stationary and click once with the left button
Double-click	Keep the mouse stationary and click twice in quick succession with the left button
Drag	Click the left button and keep depressed whilst moving the mouse

Exploring Windows

Various parts of a window can used to manipulate its size and position on screen.

Title Bar

This identifies the name of the current window or application and the name of the file being processed.

A window can be moved by dragging its title bar with the mouse.

To Move a Window

Mouse

1. Point to the Title bar
2. Click and hold down the left mouse button
3. Drag the window to a new location

Menu Bar

This shows the available menu options. Most applications have File, Edit and Help menu options.

To Select a Menu Option

Mouse

1. Click on a menu title

A pull-down menu will appear listing all options available.

2. Click on the required option

Keyboard

1. Press **[Alt]** + underlined letter of menu title
2. Press the underlined character of the required option

© CTEC

Control-Menu Box

Allows the user to move, size and close a window. Double-clicking on the Control-Menu Box is a quick method for closing a window.

☞ **To Use the Control-Menu Box**

Mouse

1. Click
2. Choose the required option

Keyboard

1. Press **[Alt]+[Spacebar]**
2. Press the underlined letter for the required option

Minimise

Shrinks the window to an icon and places it on the desktop.

☞ **To Minimise a Window**

Mouse

1. Click

Maximise

Enlarges the window to fill the entire screen.

☞ **To Maximise a Window**

Mouse

1. Click

Restore

Returns the window to its previous size and position.

To Restore a Window

Mouse

1. Click

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Launching Applications

Opening or 'launching' an application means the application runs in its own window.

☞ **To Launch an Application**

Mouse

1. Double-click on the application icon

Closing an Application

Closing an application will shut it down. If the Program Manager is closed, the user exits Windows.

☞ **To Close an Application**

Mouse

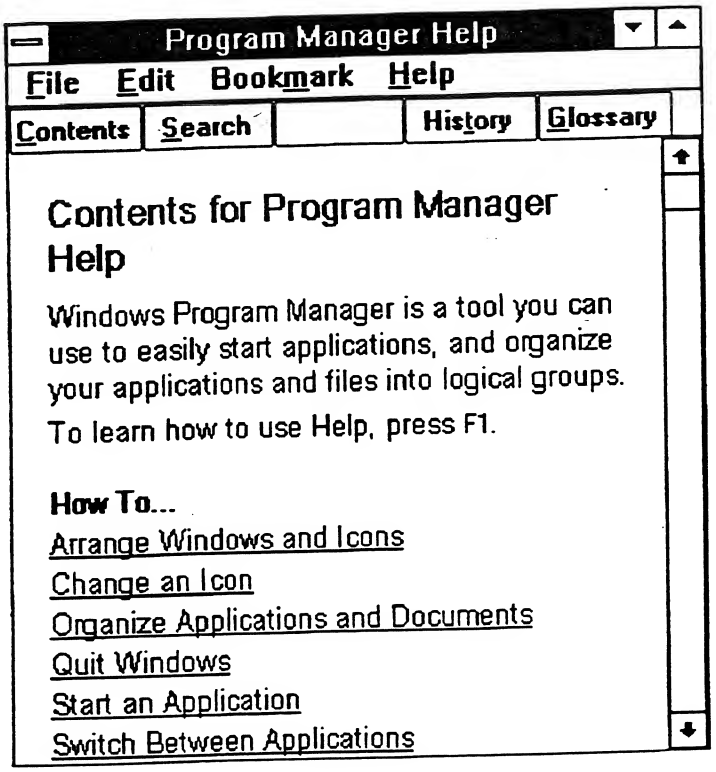
1. Double-click

Keyboard

1. Press **[Alt]+[Spacebar]**
2. Choose **Close**

Using Help

Windows *Help* offers a quick way to find information about performing particular tasks. Help options can be utilised while using an application. Within a help topic, there may be one or more ways to carry out the particular task. A help topic can be printed.


Program Manager Help
File Edit Bookmark Help
Contents Search History Glossary
Contents for Program Manager Help
Windows Program Manager is a tool you can use to easily start applications, and organize your applications and files into logical groups.
To learn how to use Help, press F1.
How To...
Arrange Windows and Icons
Change an Icon
Organize Applications and Documents
Quit Windows
Start an Application
Switch Between Applications

To Start Help

Menu

1. Choose **Help, Contents**

Keyboard

1. Press **[F1]**

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Search for Help On

Use 'Search for Help On' to find information by typing in a feature name, keyword or select from the available list of topics.

To Search for Help

Menu

1. Choose **Help**
2. Choose **Search for Help On**
3. Type a topic or keyword
4. Choose **Show Topics**

A list of related help topics appears in the lower part of the dialogue box.

5. Select a topic from the topics list
6. Choose **GoTo**

To Print a Topic

Menu

1. Choose **File, Print Topic**

Notes

© CTEC

Chapter 2
The Excel Window

C·T·E·C

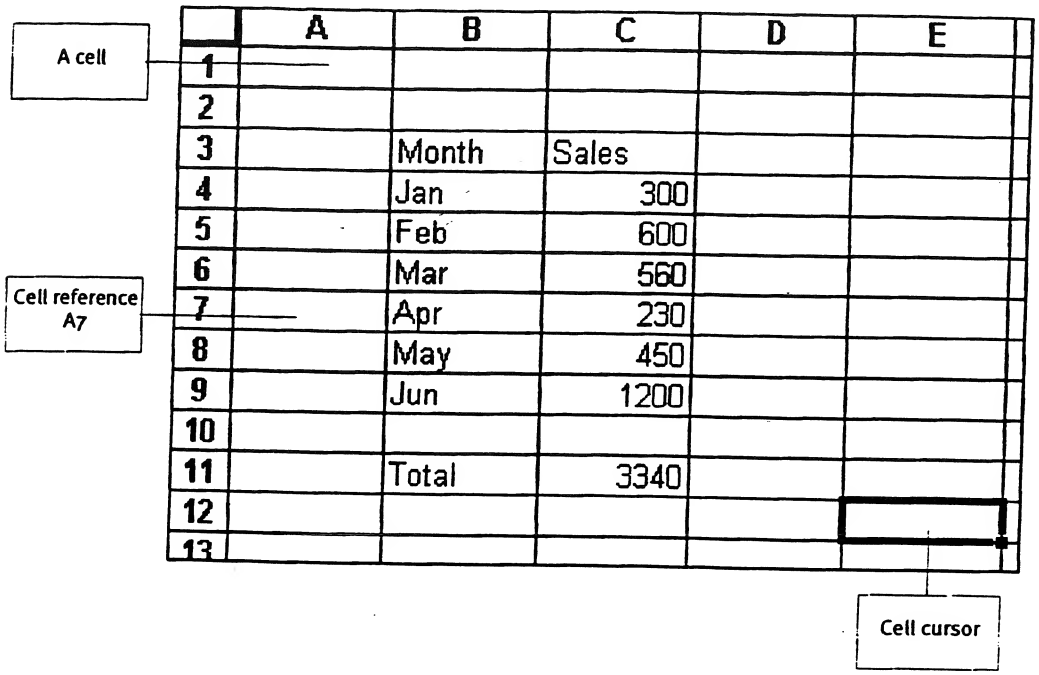
Topics

The following are covered in this chapter:

- ✓ The Spreadsheet Concept
- ✓ The Screen Layout
- ✓ Working with Toolbars and Menus
- ✓ TipWizard
- ✓ Moving Around the Worksheet
- ✓ Moving Around the Workbook

The Spreadsheet Concept

A computer *spreadsheet* is similar to a very large piece of paper which is ruled into rows and columns. The intersection of a row and a column is called a *cell* and each cell has its own unique reference, similar to a map reference.

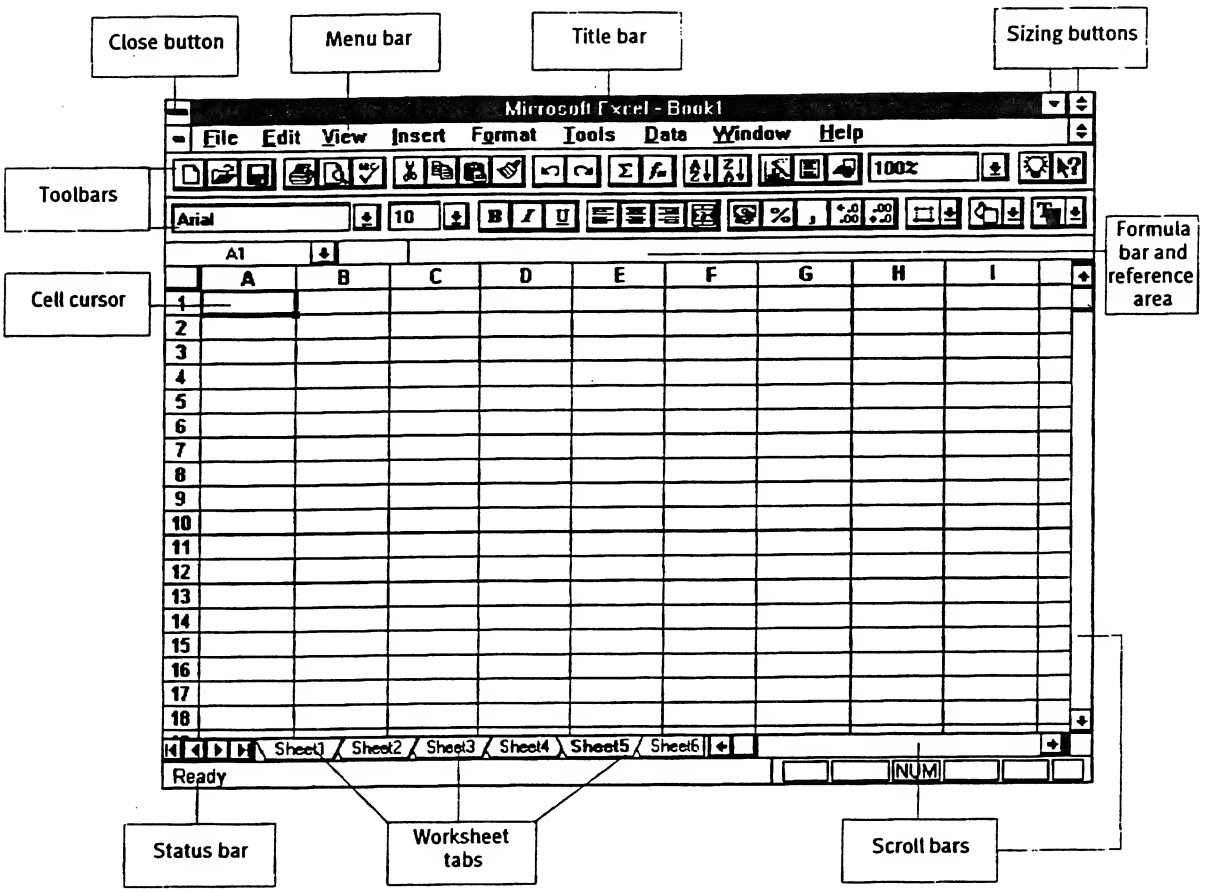


A spreadsheet can hold a variety of different data types, and is generally used when calculations need to be performed. The power of a computer spreadsheet lies in its ability to automatically recalculate formulae whenever data is changed. This saves a great deal of time and allows the user to create different results easily. Operations such as copying data, formatting numbers and creating graphs can be performed simply and quickly.

© CTEC

The Screen Layout

An Excel spreadsheet consists of 16 *worksheets* bound within a *workbook*. Each worksheet consists of a grid 256 columns wide (labelled along the top with letters A through to IV) by 16,384 rows long (labelled down the left side with numbers). Only a small section of the worksheet can be viewed at any one time. Excel 5 makes use of 3D workbooks. Although the default number of worksheets in a workbook is 16, this can be adjusted.

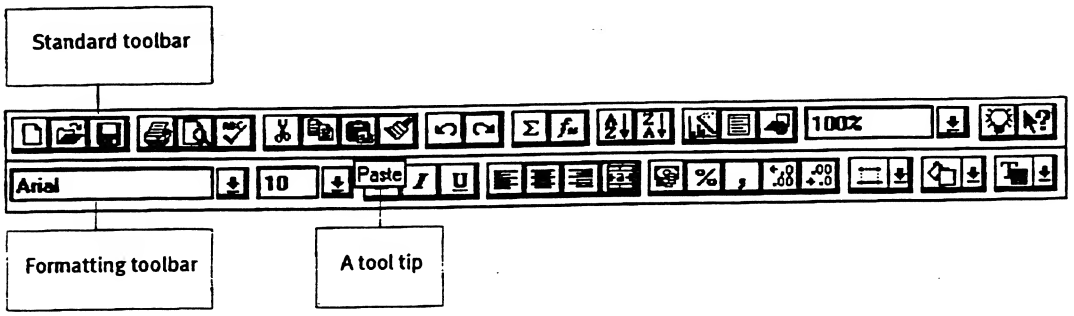


Working with Toolbars and Menus

Toolbars are a form of shortcut menu. They allow the user to carry out some of the most common functions quickly. They display a graphical representation of the tasks that the tools carry out, such as printing, saving, and changing alignment of text.

There are thirteen separate toolbars available. Two toolbars display by default, the *Standard* and *Formatting* toolbars.

If the mouse pointer is left stationary over a tool on the toolbar a *'tool tip'* appears stating the use of the tool.



To Activate a Tool on a Toolbar

Mouse

1. Click the left mouse button on the required tool

To Display Other Toolbars

Mouse

1. Click the right mouse button on any toolbar currently displayed

2. Choose the required toolbar

The same method is used to hide a toolbar.

© CTEC

Using Menus

Excel has two menus, the *menu bar* and the *shortcut menu*. The menu bar displays all options available within Excel and is accessed using the left mouse button. The shortcut menu however, only displays some of the more frequently used options, such as formatting, and is accessed via the right mouse button.

☞ To Select a Menu Bar Option

Mouse

1. Click on the menu title

A pull-down menu will appear listing all options available.

2. Choose the required menu option

Keyboard

1. Press **[Alt]** + underlined letter of menu title
2. Type the underlined character of the required option

☞ To Select a Shortcut Menu Option

Mouse

1. Click the right mouse button on the required cell

A pull-down menu will appear listing all options available.

2. Choose the required menu option

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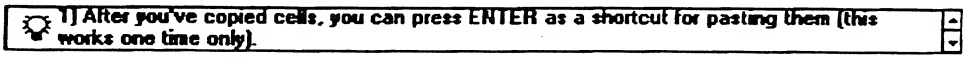
TipWizard

When Excel is launched a 'tip of the day' is offered. This can be a quick way to learn something new. The 'tip' list grows as Excel is used throughout the day.

To Read Tips

Mouse

1. Click
2. Use the up and down arrows to the right of the tip to scroll through the tips



Note

To hide the TipWizard click

© CTEC

Moving Around the Worksheet

It is important to be able to move around the worksheet efficiently as information can only be entered or changed at the position of the cell cursor.

Moving can be achieved using the mouse, keyboard or menu.

☞ **To Move Around the Worksheet**

Keyboard

Key	Action
[→]	Right one cell
[←]	Left one cell
[↑]	Up one cell
[↓]	Down one cell
[Home]	Beginning of row
[Ctrl]+[Home]	Cell A1/beginning of worksheet
[Ctrl]+[End]	Last occupied cell on the worksheet
[Page Up]	Up one screen
[Page Down]	Down one screen
[Alt]+[Page Up]	Left one screen
[Alt]+[Page Down]	Right one screen
[Ctrl]+[G]	Go to a specific cell

Menu

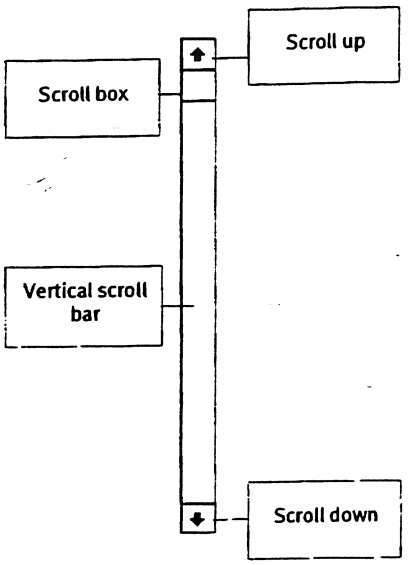
1. Choose **Edit, Go To**
2. Type cell reference required
3. Choose **OK**

Mouse

1. Click in the appropriate cell

Scroll Bars

If a cell is not in view, the scroll bars can be used to display it.



To Use the Scroll Bars

Mouse

1. Click the scroll arrows up/down or left/right

   or

   Click and drag the scroll box until the relevant cell becomes visible

To scroll long distances hold down the **[Shift]** key whilst dragging the scroll box.

Note

When dragging the scroll box, the name box displays the row or column the user will move to.

Moving Around the Workbook

Each time Excel is launched, a blank workbook is presented named Book1. Each workbook contains worksheets, named Sheet1 to Sheet6. The sheet name appears on a tab at the bottom of the workbook window.

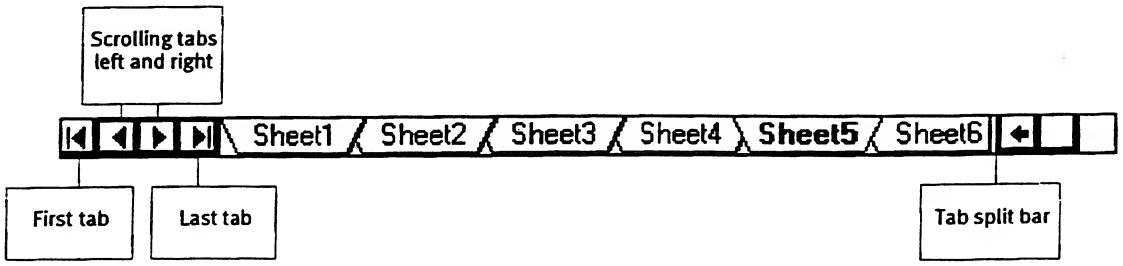
To Move Between Worksheets

Mouse

1. Click on the appropriate tab

Note

If the sheet required is not in view, use the tab scrolling buttons to display it.



Keyboard

Key	Action
[Ctrl]+[Page Down]	Next sheet
[Ctrl]+[Page Up]	Previous sheet

Notes

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Chapter 3
Creating a Worksheet

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Entering Data
- ✓ Editing Data
- ✓ Selecting Ranges of Cells
- ✓ Entering a Range of Data
- ✓ Erasing Data
- ✓ The Undo/Redo Command

Entering Data

Data will appear in the cell where the cell cursor is located. As data is typed, an insertion point will automatically display, and all data will appear to the right of the insertion point.

☞ **To Enter Data**

Mouse

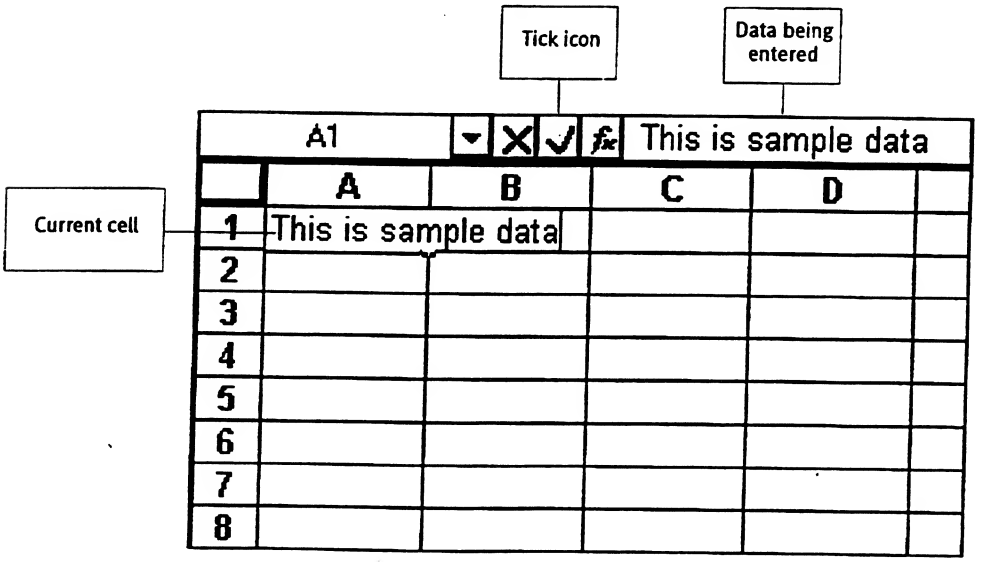
1. Select the required cell
2. Type text
3. Click ☑

   or

   Click in another cell

Keyboard

1. Type text
2. Press **[Return]**



Note

When data is entered into a cell, the data is stored in that single cell even though it may appear to have extended into the next cell.

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Types of Data

Excel distinguishes between two main types of data: text and numbers.

Types of Data	Description
Text	Any characters which are not to be used in calculations
Numbers	Data to be used in calculations, e.g. numbers, formulae and characters such as + - * / % etc.

Note

By default, when data is entered in a cell, text is automatically left aligned and numbers right aligned.

Editing Data

Existing cell entries can be edited, enabling characters to be inserted or deleted. If required, data in a cell can be completely overtyped.

☞ **To Edit Cell Entries**

Mouse

1. Double-click in the cell required
2. Position the insertion point
3. Make changes required
4. Click ☑

Keyboard

1. Move to the required cell
2. Press **[F2]**
3. Position the insertion point
4. Make changes required
5. Press **[Return]**

☞ **To Overtype Cell Entries**

Keyboard

1. Move to the required cell
2. Type new data
3. Press **[Return]**

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Editing Whilst Typing

When typing data into a cell, if any errors are made before **[Return]** is pressed, there are several ways to remove the mistake:

Mouse

1. Click ☒

Keyboard

1. Press **[Esc]**

Note

Press **[Backspace]** to erase the previous character typed.

Insertion Point Control Keys and Editing Keys

The insertion point can be moved around a cell entry in several ways. Data is removed using the editing keys.

Insertion Point Control Keys	Action
[→]	Move right one character
[←]	Move left one character
[Home]	Beginning of the cell contents
[End]	End of cell contents

Editing Keys	Action
[Backspace]	Deletes to the left of the insertion point
[Delete]	Deletes to the right of the insertion point

Selecting Ranges of Cells

A block of data is known as a *range.* To enter or edit data in several rows or columns, it is necessary to select a block of data.

☞ **To Select Ranges**

Mouse

Action	Selection
Click	One cell
Click and drag	Range of cells
Click in one cell, hold **[Shift]** click in another cell	Range of cells
[Ctrl] + click and drag	Multiple ranges
Click on row number	Whole row
Click on column letter	Whole column
Click to left of column A	Whole worksheet

Selection can be cancelled by clicking in any cell.

Keyboard

Key	Selection
[Arrows]	One cell
[Shift]+[Arrows]	Range of cells
[Shift]+[Spacebar]	Whole row
[Ctrl]+[Spacebar]	Whole column
[Ctrl]+[A]	Whole worksheet

Selection can be cancelled by moving to another cell.

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Entering a Range of Data

Data can be entered into a range of cells quickly .

☞ **To Enter Data into a Range**

Mouse

1. Select the range
2. Type data
3. Press **[Return]**
4. Repeat steps 2 and 3 until finished

Once completed, click in any cell to cancel the selection.

Keys for Entering Data in a Range

There are several keys that allow the user to move through a selected range of cells.

Key	Action
[Return]	Next cell down
[Shift]+[Return]	Previous cell up
[Tab]	Next cell right
[Shift]+[Tab]	Next cell left

Erasing Data

Data can be erased in several ways:

- erasing the contents of a cell, leaving the cell blank (deleting text, numbers and formulae)
- clearing the formats of a cell, leaving the contents as entered with no formatting
- clearing all, which will remove both contents and formatting

To Clear Contents

Keyboard

1. Select cell(s)
2. Press **[Delete]**

Mouse

1. Select cell(s)
2. Click the right mouse button in the selected area
3. Choose **Clear Contents**

To Clear Contents, Formats or All

Menu

1. Select cell(s)
2. Choose **Edit, Clear**
3. Choose the required option, e.g. All

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The Undo/Redo Command

Excel keeps track of all editing and formatting changes that are made to a worksheet. If a mistake is made, Excel allows the action to be undone. Only the last process is remembered.

☞ **To Undo**

Mouse

1. Click

Menu

1. Choose **Edit, Undo**

☞ **To Redo**

Mouse

1. Click

Menu

1. Choose **Edit, Redo**

Notes

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Chapter 4
Formulae

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Creating Formulae
- ✓ Changing the Order of a Calculation

Creating Formulae

All formulae start with =, e.g. 10-6 would be =10-6. Normally, formulae contain cell references instead of actual numbers, so that the formulae will recalculate whenever the numbers in the cells referred to are changed. A typical formula could be =B11-B12. When creating a formula several arithmetic operators may be used.

Operators	Description
+	Addition
-	Subtraction
*	Multiplication
/	Division
^	Exponential

To Create a Formula

Mouse

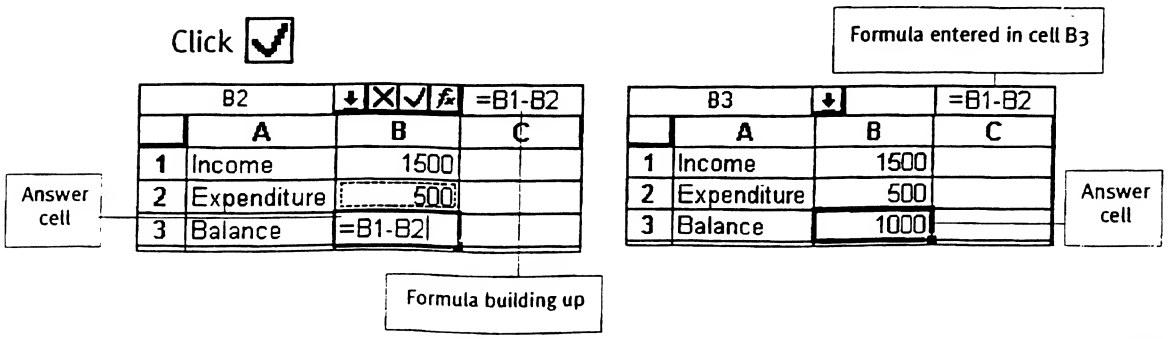
1. Select the answer cell
2. Type **=**
3. Select the first cell in the calculation

The selected cell will have an outline around it.
If the wrong cell is selected it can be changed by selecting another cell.

4. Type an arithmetic operator, e.g. +
5. Repeat steps 3 and 4 until the calculation is complete
6. Press **[Return]**

or

Click



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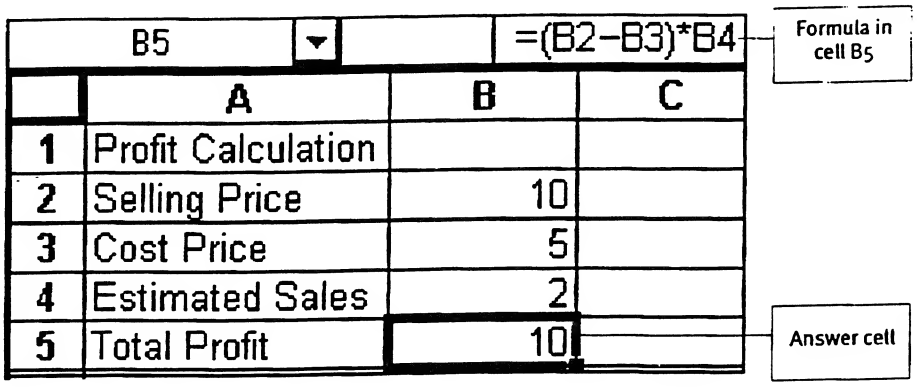
Changing the Order of a Calculation

Brackets can be used to change the order of arithmetic precedence. A term known to may users as *BODMAS* explains the order of precedence used in calculations.

BODMAS	**Description**
Brackets	0
Order	^ (Exponential e.g. x^2)
Division	/
Multiplication	*
Addition	+
Subtraction	-

If a calculator was used to input the calculation 10+5*2, the answer expected would be 30. However, in Excel the answer given to =10+5*2 would be 20, as multiplication is calculated before addition. Using brackets will change the order of the calculation e.g. =(10+5)*2, would give the answer 30.



Notes

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Chapter 5
File Procedures

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ File Operations

File Operations

Saving, Closing, Opening and creating *New* workbooks are options available in Excel 5. These options allow the user to store their work, clear it from the screen, re-open it at a later date and produce a new workbook.

Saving a Workbook

Spreadsheets may be saved, at any time. It is important to save work at regular intervals, not just at the end of the spreadsheet. When a new workbook is saved a name must be given using the following rules:

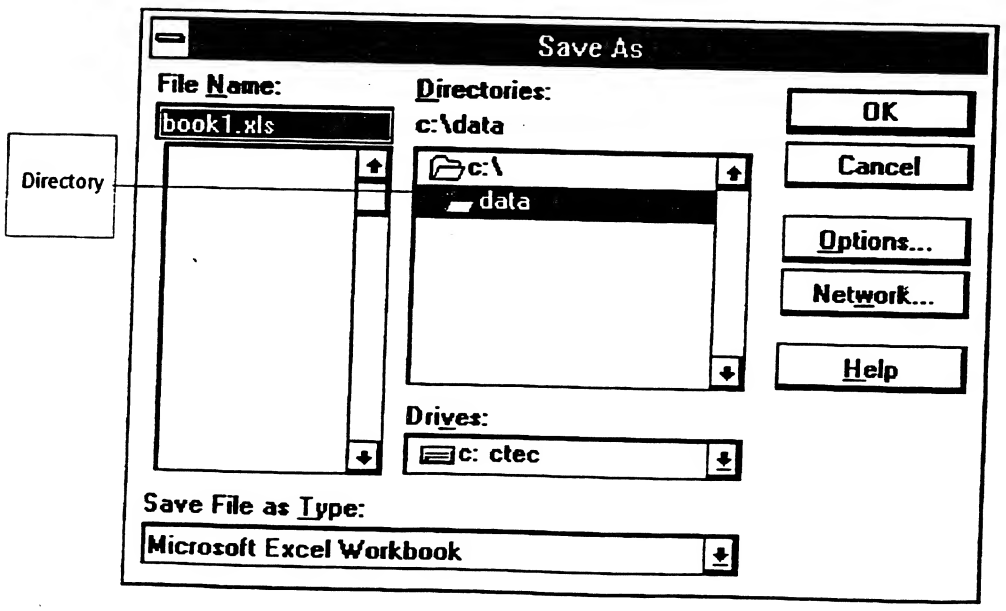
- a combination of letters and numbers up to a maximum of 8 characters can be used
- no spaces
- no punctuation - except the underscore symbol
- unique name

Excel 5 workbooks are automatically given the extension .XLS.

To Save a New Workbook

Menu

1. Choose **File, Save As**



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2. Type in a unique filename
3. Select the area (drive) to save in
4. Select the directory to save in by double-clicking on the appropriate directory
5. Choose **OK**

Mouse

1. Click
2. Follow steps 2 to 5 as menu method

To Resave an Existing Workbook

Menu

1. Choose **File, Save**

Mouse

1. Click

Note

When resaving a workbook Excel automatically saves the workbook with the current name with no further prompting. A blue bar flashes across the *Status bar* as the workbook is saved.

Closing a Workbook

Once a workbook is completed, then the workbook window can be closed. When closing, if the workbook has not been saved, Excel prompts the user to save changes.

To Close a Workbook

Menu

1. Choose **File, Close**

Opening an Existing Workbook

A workbook that has been saved can be re-opened later for further amendment. Several workbooks can be opened at one time by holding the **[Ctrl]** key whilst selecting the filenames.

To Open a Workbook

Menu

1. Choose **File, Open**
2. Select the required area (drive) and directory
3. Select the appropriate filename(s)
4. Choose **OK**

Mouse

1. Click
2. Follow steps 2 to 4 as menu method

Note

Excel lists the last 4 workbooks used at the bottom of the File menu. To open one of these workbooks, simply select it from the list.

Starting a New Workbook

Each time Excel 5 is launched, a blank workbook is automatically created, thereafter the user can request new workbooks as required. Initially, workbooks contain 16 sheets by default, but extra worksheets can be added or removed if required.

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To Create a New Workbook

Menu

1. Choose **File, New**

Mouse

1. Click

Notes

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Chapter 6
Moving and Copying Data

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Moving Data
- ✓ Copying Data
- ✓ Using the Cell Handle

Moving Data

Data can easily be *moved* from one location to another, and if required from one worksheet or workbook to another, using the mouse, menu bar, toolbar or shortcut menu.

☞ **To Move Data**

Menu

1. Select data
2. Choose **Edit, Cut**

   or

   Click the right mouse button on the selected data, choose **Cut**
3. Move to new position
4. Choose **Edit, Paste**

   or

   Click the right mouse button on the required cell, choose **Paste**

   or

   Press **[Return]**

Mouse

1. Select data
2. Click
3. Move to new position
4. Click

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Moving Data Using the Drag and Drop Feature

Data can be moved to another location using a feature known as *Drag and Drop*.

To Drag and Drop

Mouse

1. Select data
2. Position the mouse pointer on any edge of the selected area

The mouse pointer changes to an arrow.

3. Click and drag to new location

An outline displays whilst dragging.

4. Release the mouse button

Copying Data

Copying is used to duplicate data in one part of the spreadsheet to another.

To Copy Data

Menu

1. Select data
2. Choose **Edit, Copy**

   or

   Click the right mouse button on the selected data, choose **Copy**
3. Move to new position
4. Choose **Edit, Paste**

   or

   Click the right mouse button on the required cell, choose **Paste**

   or

   Press **[Return]** for one copy
5. Repeat steps 3 and 4 for more copies

Mouse

1. Select data
2. Click
3. Move to new position
4. Click

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Copying Data Using the Drag and Drop Feature

Data can be copied to another location using the drag and drop feature.

To Copy Using Drag and Drop

Mouse

1. Select data
2. Position the mouse pointer on any edge of the selected area
3. **[Ctrl]** + click and drag to new location

An outline displays whilst dragging.

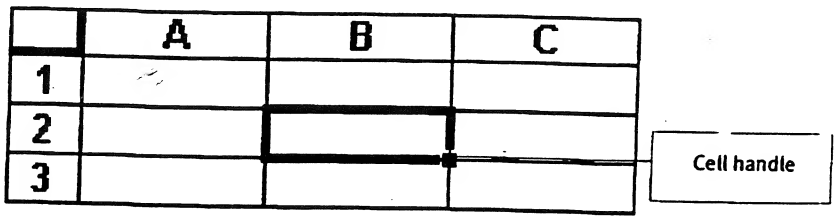
4. Release the mouse

Note

When the data is dragged with the **[Ctrl]** key depressed, the mouse pointer will have a small + sign attached to it - this means that data will be copied and not moved.

Using the Cell Handle

The *Cell Handle* is especially useful when copying formulae across a range. It allows the formulae to be created only once and then copied into the relevant adjacent cells. When a formula is copied in Excel the references used are adjusted. This is because Excel does not record the actual cell references, but records the position of the cells referred to in relation to the cell containing the formula. This is known as *Relative Cell Referencing*.



To Copy Data to an Adjacent Range

Mouse

1. Select data to copy
2. Position the mouse pointer on the Cell Handle

The mouse pointer shape changes to a thin crosshair.

3. Click and drag over the adjacent range
4. Release the mouse

Menu

1. Select data and the adjacent cells to copy to
2. Choose **Edit, Fill**
3. Choose the required direction, e.g. Right

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Entering a Sequence of Data Using the Cell Handle

The cell handle can be used to quickly enter a sequence of numbers, dates and text.

	A	B	C	D
1	Week1	03-Jan-95	Qtr1	1st Qtr 95
2	Week2	04-Jan-95	Qtr2	2nd Qtr 95
3	Week3	05-Jan-95	Qtr3	3rd Qtr 95
4	Week4	06-Jan-95	Qtr4	4th Qtr 95
5	Week5	07-Jan-95	Qtr1	1st Qtr 96
6	Week6	08-Jan-95	Qtr2	2nd Qtr 96
7	Week7	09-Jan-95	Qtr3	3rd Qtr 96
8	Week8	10-Jan-95	Qtr4	4th Qtr 96

To Enter a Sequence

Mouse

1. Type the first entry of the sequence
2. Click and drag the cell handle over the required area
3. Release the mouse

Notes

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Chapter 7
Functions and Absolute References

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Using Statistical Functions
- ✓ Using AutoSum
- ✓ Absolute Cell References
- ✓ Conditional Logic

Using Statistical Functions

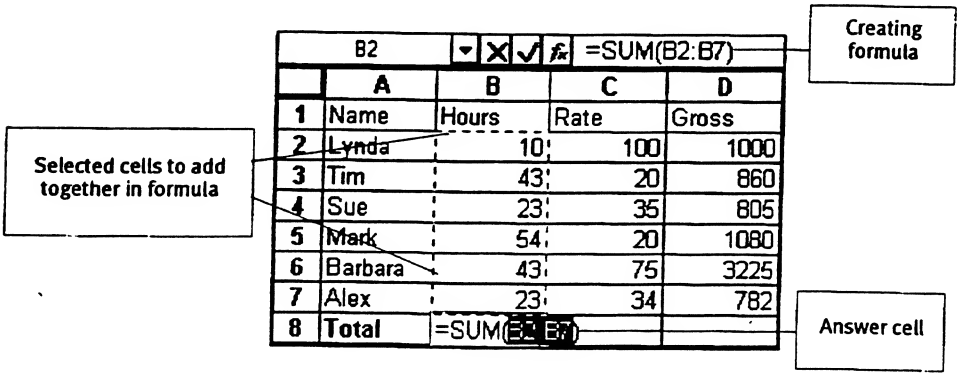
Excel has a number of built in functions which perform specialised calculations automatically. Some of the most frequently used are:

Function	Description
=SUM(range)	Calculates the sum of a range of numbers
=AVERAGE(range)	Calculates the average of a range of numbers
=MAX(range)	Calculates the maximum number in a range
=MIN(range)	Calculates the minimum number in a range
=COUNT(range)	Calculates the number of entries in a range

To Use the Sum Function

Mouse

1. Select the answer cell
2. Type **=SUM(**
3. Select the range of cells to sum together
4. Type)
5. Press **[Return]**



	A	B	C	D
1	Name	Hours	Rate	Gross
2	Lynda	10	100	1000
3	Tim	43	20	860
4	Sue	23	35	805
5	Mark	54	20	1080
6	Barbara	43	75	3225
7	Alex	23	34	782
8	Total	=SUM(B2:B7)		

Note

Once a formula has been created, use the cell handle to copy formula across/down to the required range - remember the formula only needs to be created once.

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Using the Function Wizard

The *Function Wizard* helps to create a formula so that syntax errors are avoided. Users can choose one of the most recently used functions, or choose another function category.

To Use the Function Wizard

Mouse

1. Select the answer cell
2. Click f_x

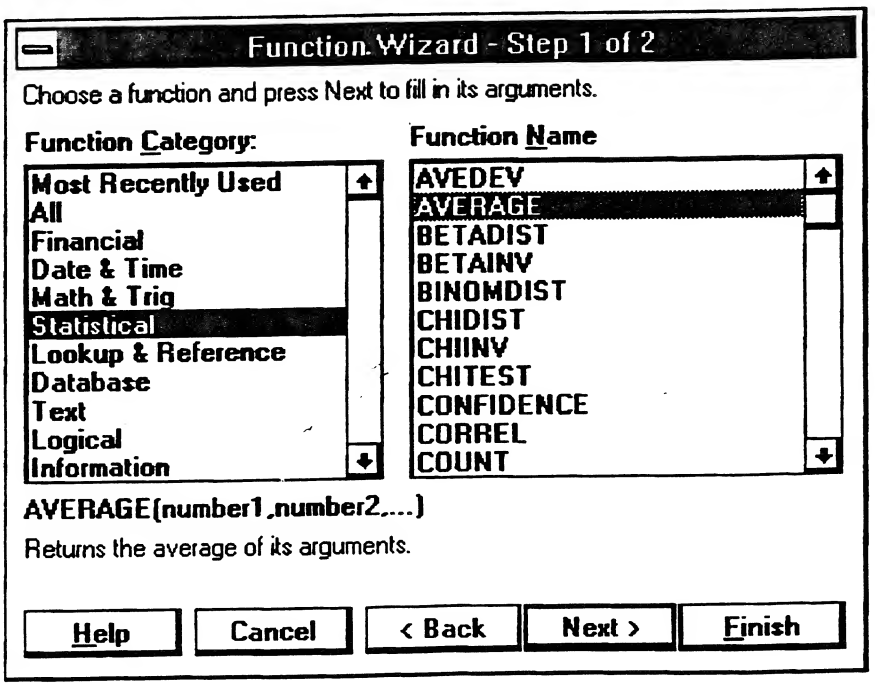
   or

   Type =

   From the Formula bar click f_x

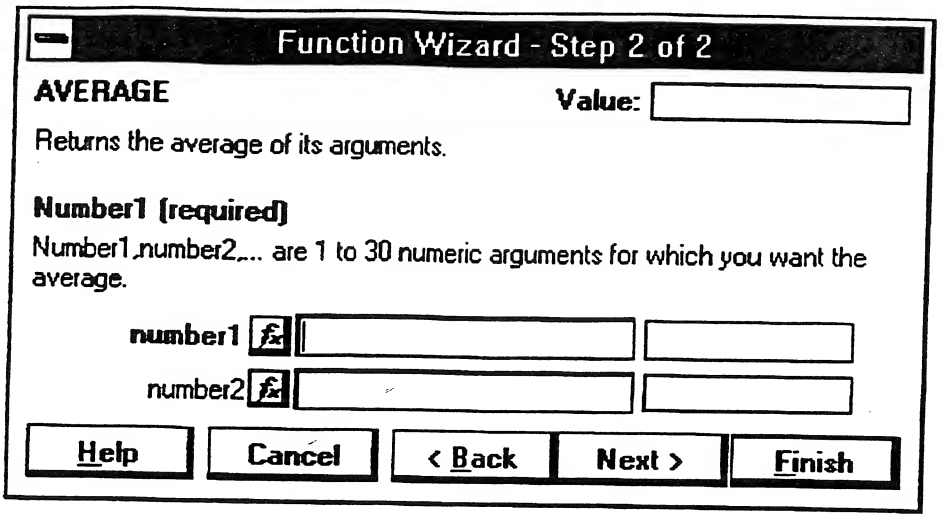
The Function Wizard now displays step 1 of 2.

3. Select the required function category, e.g. Statistical
4. Select the required function, e.g. Average



5. Choose **Next**

The Function Wizard now displays step 2 of 2.



6. Select the range on the worksheet

If the range is not in view, click and drag the Function Wizard title bar to move it from view.

7. Choose **Finish**

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Using AutoSum

Any totals on the spreadsheet may be calculated very quickly using the *AutoSum* button, instead of typing the =Sum function.

To Use AutoSum

Mouse

1. Select the answer cell
2. Click Σ

The formula is automatically written and a range is selected. If the range is not correct it can be reselected in the normal way.

3. Click Σ

Note

The AutoSum will always suggest a range based on values above or to the left of the answer cell. The range above takes priority.

Absolute Cell References

Sometimes when copying a formula that contains a cell reference, it is important that the reference is not relative, e.g. does not change as it is copied to other cells. This means that the cell reference in the formula must be made *Absolute* (fixed).

To Absolute a Cell

Mouse

1. Create the formula in the normal way, selecting the cells to include
2. Press **[F4]** whilst selecting the cell that is to be absolute

An Absolute reference appears, e.g. $A$1.

The **[F4]** key offers four options if pressed repeatedly, e.g. $A1, A$1, A1, $A$1.

The $ symbol means fix, so that any part of the cell reference can be made absolute.

3. Complete the formula as normal

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Conditional Logic

Having the ability to test cells, and make decisions based on the cell contents is one of the most valuable functions in Excel. Conditional Logic uses a function known as the *IF* function to make decisions based on a logical test.

The =IF function is used whenever there are two possible courses of action, depending on whether the condition is true or false.

E.g. **=IF(Condition,Action If True,Action If False)**

The condition contains one of the following logical operators:

Symbol	Meaning
=	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
<>	Not equal to

Examples of the =IF function are shown below:

Formula	Description
=IF(B1<B2,"OOPS","SPEND")	If B1 is less than B2, then display the text OOPS, otherwise display the text Spend
=IF(B6>0,B6*2%,0)	If B6 is greater than zero, then B6 is multiplied by 2%, otherwise zero displays
=IF(B6>0,"Credit","O/D")	If B6 is greater than zero, the message displayed is Credit, otherwise the message displayed is O/D

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Chapter 8
Spreadsheet Presentation

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Enhancing a Spreadsheet
- ✓ Spell Checking Feature

Enhancing a Spreadsheet

The appearance of a spreadsheet may be altered to make it easier and clearer to understand.

The range to change must always be selected first before formats are added. Formats can be applied using the menu, toolbars, mouse or shortcut menus. Usually the quickest way of formatting cells is to use a button from one of the toolbars, e.g. the Formatting toolbar.

Inserting/Deleting Columns and Rows

Rows and columns can be inserted or deleted in a spreadsheet wherever necessary.

☞ **To Insert a Column or Row**

Menu

1. Select the column or row
2. Choose **Insert, Rows**

   or

   Choose **Insert, Columns**

   or

   Click the right mouse button on the selected column or row, choose **Insert**

☞ **To Delete a Column or Row**

Menu

1. Select the entire column or row
2. Choose **Edit, Delete**

   or

   Click the right mouse button on the selected column or row, choose **Delete**

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Note

When choosing the delete option, if the entire row or column is not selected, a dialogue box will display, offering the opportunity to delete the entire row or entire column.

Adjusting Column Widths

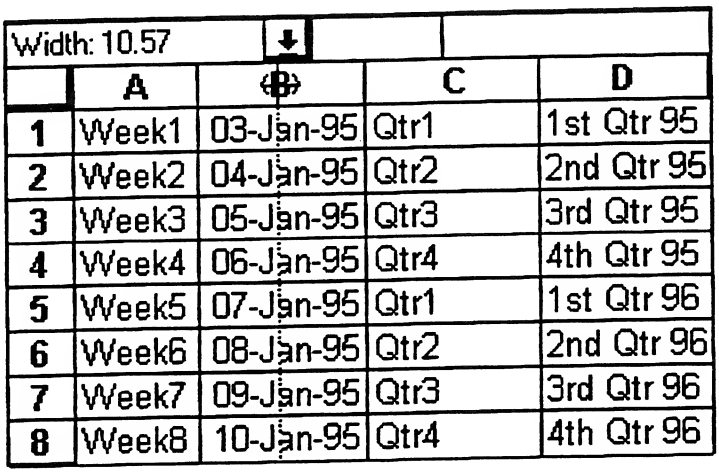
The standard *column width* in a new Excel worksheet is set to 8.43. This may be altered through the menu or with the mouse.

To Change the Column Width

Mouse

1. Select the column(s)
2. Position the mouse on the line to the right of the column letter

The mouse pointer changes shape.


Width: 10.57
A
B
C
D
1 Week1 03-Jan-95 Qtr1 1st Qtr 95
2 Week2 04-Jan-95 Qtr2 2nd Qtr 95
3 Week3 05-Jan-95 Qtr3 3rd Qtr 95
4 Week4 06-Jan-95 Qtr4 4th Qtr 95
5 Week5 07-Jan-95 Qtr1 1st Qtr 96
6 Week6 08-Jan-95 Qtr2 2nd Qtr 96
7 Week7 09-Jan-95 Qtr3 3rd Qtr 96
8 Week8 10-Jan-95 Qtr4 4th Qtr 96

3. Click and drag right to increase or left to decrease the column width

   or

   Double-click to adjust the width of the longest entry in the column

Menu

1. Select the column(s)
2. Choose **Format, Column**
3. Choose the required format, e.g. Width
4. Type a measurement
5. Choose **OK**

Modifying the Row Height

The standard *row height* in a new Excel worksheet is set to 12.75. This may be altered through the menu or with the mouse.

To Modify the Row Height

Mouse

1. Select the row(s)
2. Position the mouse on the line below the row number

The mouse pointer changes shape to a double arrow.

3. Click and drag down to increase or up to decrease the row height

   or

   Double-click to accommodate the largest font size in the row

Menu

1. Select the row(s)
2. Choose **Format, Row**
3. Choose the required format, e.g. Height
4. Type a measurement
5. Choose **OK**

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Changing the Alignment of Data

When entering data into a cell, Excel aligns it according to the default alignment known as *General alignment*. General alignment right aligns numbers, formulae and dates and left aligns text.

To Change the Alignment

Menu

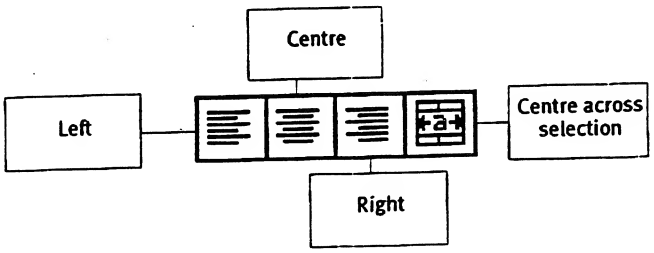
1. Select the required cell(s)
2. Choose **Format, Cells**

   or

   Click the right mouse button on selected cell(s), choose **Format Cells**
3. Choose the **Alignment** tab
4. Choose the required alignment, e.g. Center
5. Choose **OK**

Mouse

1. Select the required cell(s)
2. Click on the required alignment button



Changing the Font, Size and Type

The *font, size, style* and *colour* of data in cells can be changed.

To Change the Font, Size, Style and Colour

Menu

1. Select the required cell(s)

   Choose **Format, Cells**

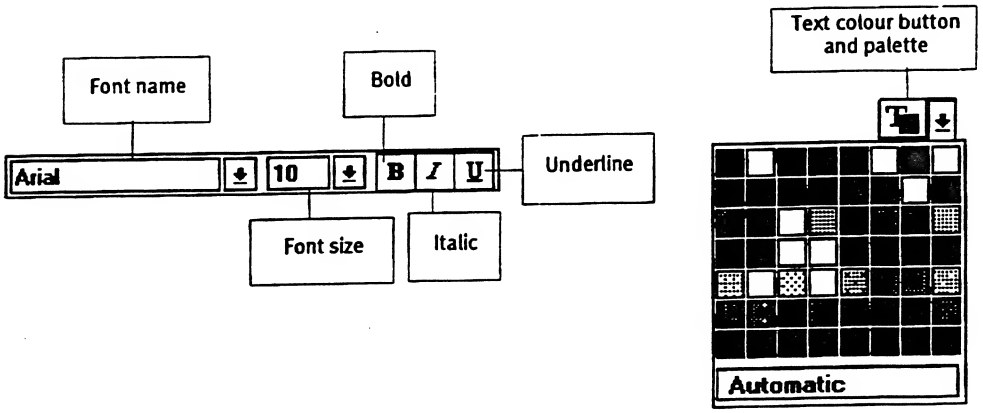
   or

   Click the right mouse button on selected cell(s), choose **Format Cells**

2. Choose the **Font** tab
3. Choose the required font, size, style and colour
4. Choose **OK**

Mouse

1. Select the required cell(s)
2. Click on the required button



Note

The text palette can be moved off the toolbar so that it can be used more efficiently, simply by dragging it on to the worksheet.

To remove the palette, click

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Altering the Number Display

Number formats change the way that data is displayed, especially numbers. Users can also create their own number formats.

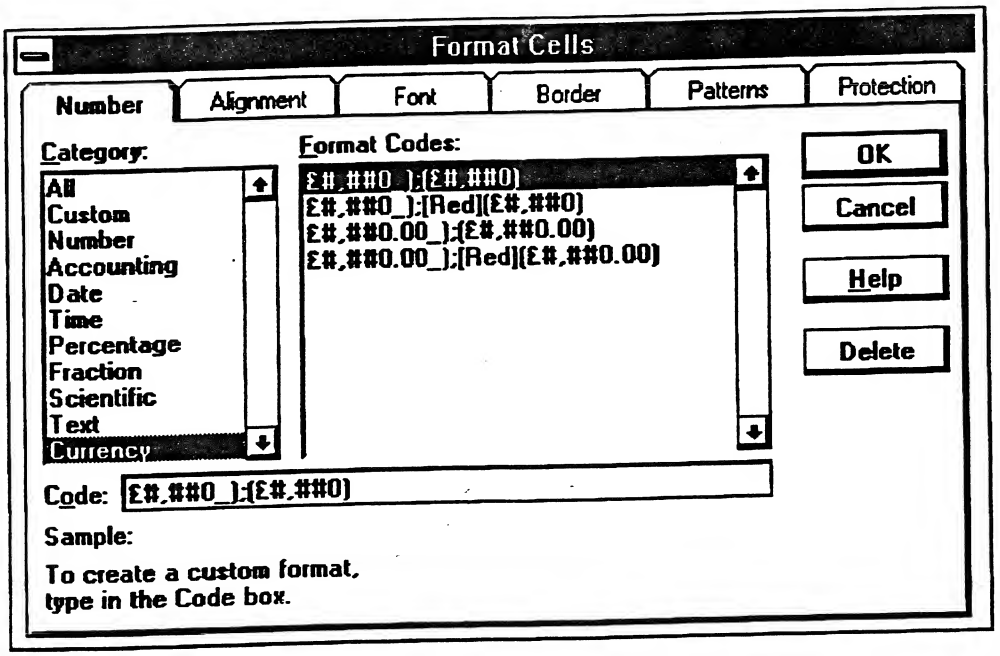
To Alter the Number Format

Menu

1. Select the required cell(s)
2. Choose **Format, Cells**

   or

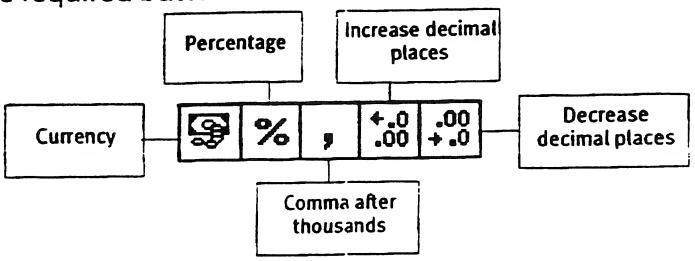
   Click the right mouse button on selected cell(s), choose **Format Cells**
3. Choose the **Number** tab
4. Choose the required category, e.g. Currency
5. Choose the required format



6. Choose **OK**

Mouse

1. Select the required cell(s)
2. Click on the required button



To Create Number Formats

Menu

1. Select the required cell(s)
2. Choose **Format, Cells**

   or

   Click the right mouse button on selected cell(s), choose **Format Cells**
3. Choose the **Number** tab
4. In the Code box, type the required number format, e.g. £#,##0;-£(#,##0)

When typing the number format code, use one of the existing codes as a starting point. Two formats can be defined, one for positive numbers and another for negative numbers. The two formats are separated by a semicolon, e.g. Positive format;Negative format

5. Choose **OK**

Examples	Description
£#,###;(£#,###)	1000 becomes £1,000 23.891 becomes £24 -56 becomes (£56)
#,##0.00;[Red](0.0)	1000 becomes 1,000.00 23.891 becomes 23.89 -56 becomes (56.0) in red

Colours that may be specified are: [Black][Blue][Cyan][Green][Magenta][Red][Yellow][White].

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If a text character is to be inserted into a number format e.g. FFR or $, it can simply be added to the code. But if text is required in a number format that Excel does not class as valid, then enclose the text in "".

Examples	Description
$#,##o.oo;[Blue]"Neg."	1000 becomes $1,000.00 23.898 becomes $23.90 -56 becomes -$56.00 in blue
#,##o FFR;[Blue]"Neg."	1000 becomes 1,000 FFR 23.891 becomes 24 FFR -56 becomes Neg. in blue
;;"No Sales";[Green]	o becomes No Sales Text is coloured green

The last example shown demonstrates how zeros and text can also be manipulated in addition to positive and negative numbers. The syntax for defining positive, negative, zeros and text entries is as follows:

Positive;Negative;Zero;"Text"

Adding Borders

Borders can be used to highlight key information on a spreadsheet. They can be drawn in any combination of horizontal and vertical lines on the left, right, top and bottom of a range.

To Add Borders

Menu

1. Select the required cell(s)
2. Choose **Format, Cells**

   or

   Click the right mouse button on selected cell(s), choose **Format Cells**
3. Choose the **Border** tab

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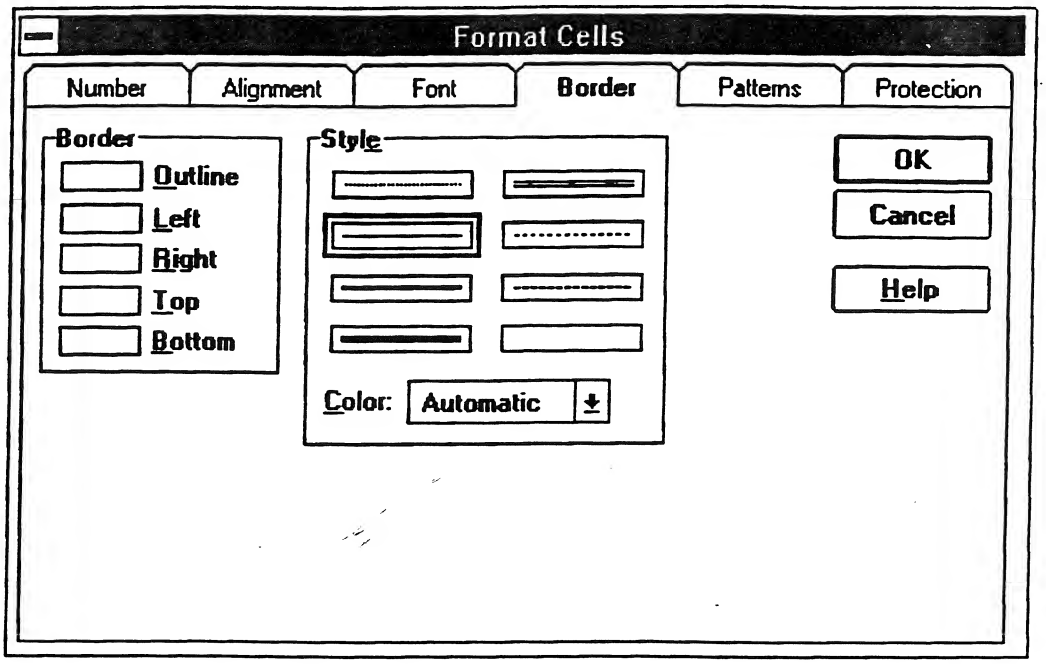
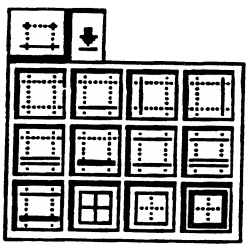


4. Choose the border style, colour and position required

5. Choose **OK**

Mouse

1. Select the required cell(s)

2. Click 

3. Choose the border required from the palette

Once the borders have been chosen, the borders button retains the last choice made.

Note

The border palette can be moved off the toolbar so that is can be used more efficiently, simply by dragging it on to the worksheet.

To remove the palette, click

© CTEC

Adding Shading

Shading can be used to add further emphasis to a worksheet by highlighting the data on the spreadsheet.

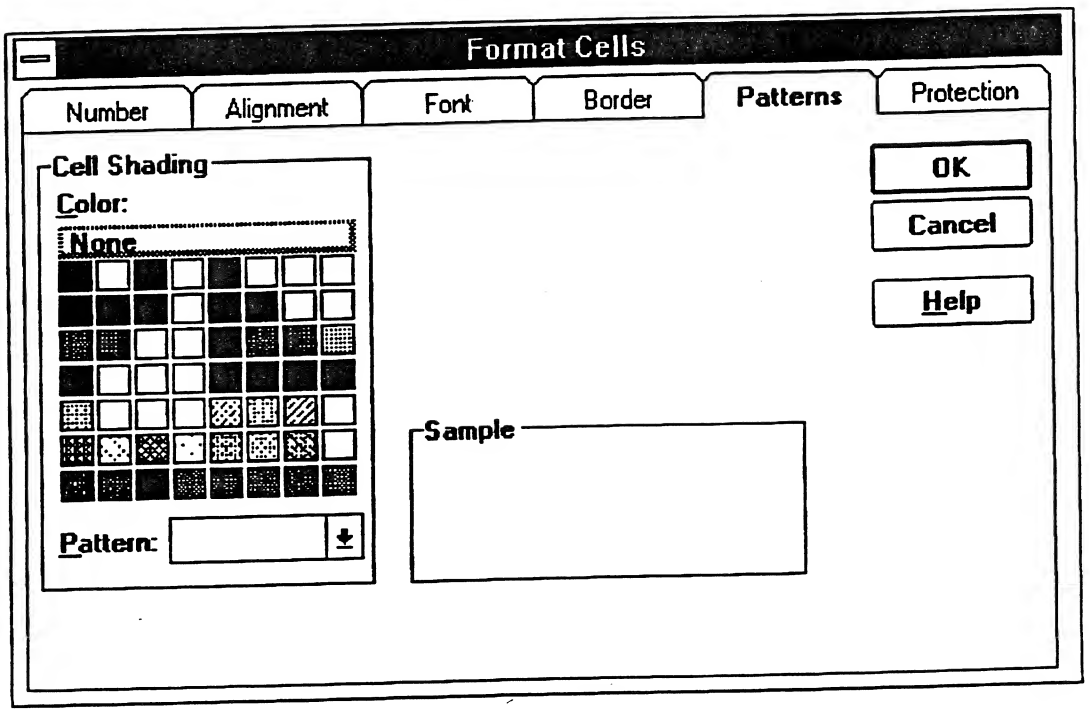
To Add Shading

Menu

1. Select the required cell(s)
2. Choose **Format, Cells**

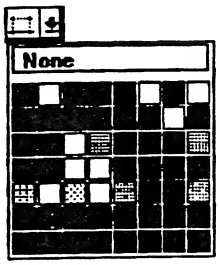
   or

   Click the right mouse button on selected cell(s), choose **Format Cells**
3. Choose the **Patterns** tab



4. Choose the colour and pattern required
5. Choose **OK**

Mouse

1. Select the required cell(s)
2. Click 

3. Choose the required colour

Once the colour has been chosen, the colour button retains the last choice made.

Note

The colour palette can be moved off the toolbar so that it can be used more efficiently, simply by dragging it on to the worksheet.

To remove the palette, click

Applying an Automatic Format

An *Automatic Format* is a selection of pre-defined styles which have been grouped together and given a name, e.g. Classic 3, and can be used to quickly format a spreadsheet.

To Select an Automatic Format

Menu

1. Select the range
2. Choose **Format, AutoFormat**
3. Choose the format required, e.g. Classic 3
4. Choose **OK**

Note

Choosing **Options** from the AutoFormat dialogue box allows the user to select which formats to apply.

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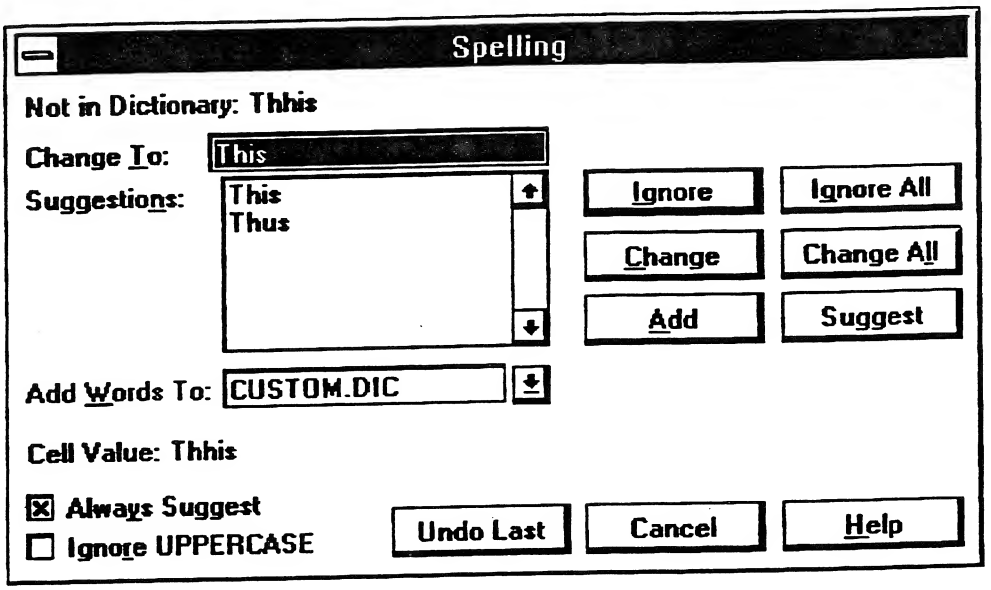
Spell Checking Feature

When the *Spell Checker* is started any incorrect spellings, duplications and irregular capitalisations will be highlighted and alternative suggestions displayed.

☞ **To Check for Spelling Errors**

Menu

1. Choose **Tools, Spelling**



2. Choose the required command

Commands	Description
Ignore	Leaves the selected word unchanged
Ignore All	Leaves the selected word unchanged throughout the worksheet
Change	Changes the selected word to the suggested word in the Change To box
Change All	Changes the selected word throughout the selected worksheet to the suggested word in the Change To box
Add	Adds the selected word to the dictionary

Mouse

1. Click
2. Choose the required command

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Notes

Chapter 9 Printing

C·T·E·C

Topics

The following topics are covered in this chapter:

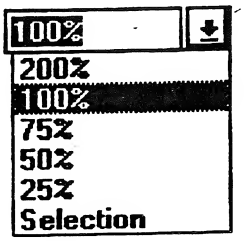
- ✓ Viewing a Document
- ✓ Page Setup
- ✓ Defining Page Breaks
- ✓ Defining Titles
- ✓ Printing the Document
- ✓ Setting Print Areas

Viewing a Document

When a spreadsheet is completed it can be viewed by *zooming in* and *out*.

To Zoom In and Out

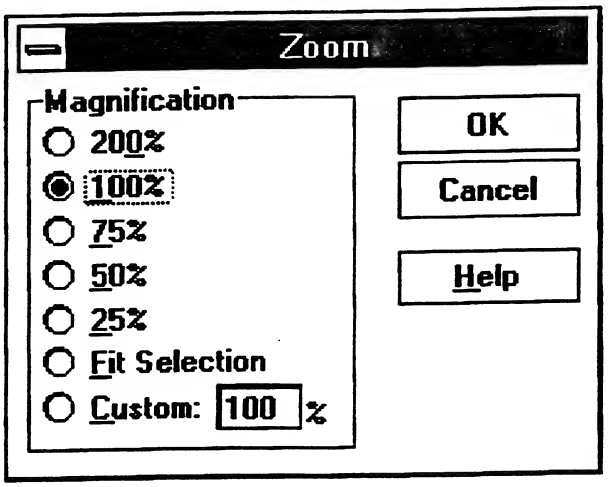
Mouse

1. Click 

2. Choose the required view

Menu

1. Choose **View, Zoom**



2. Choose the required view

3. Choose **OK**

Note

Using 200% can be useful when working with graphic objects, which require fine manipulation.

25% provides a good overview of the layout for the spreadsheet.

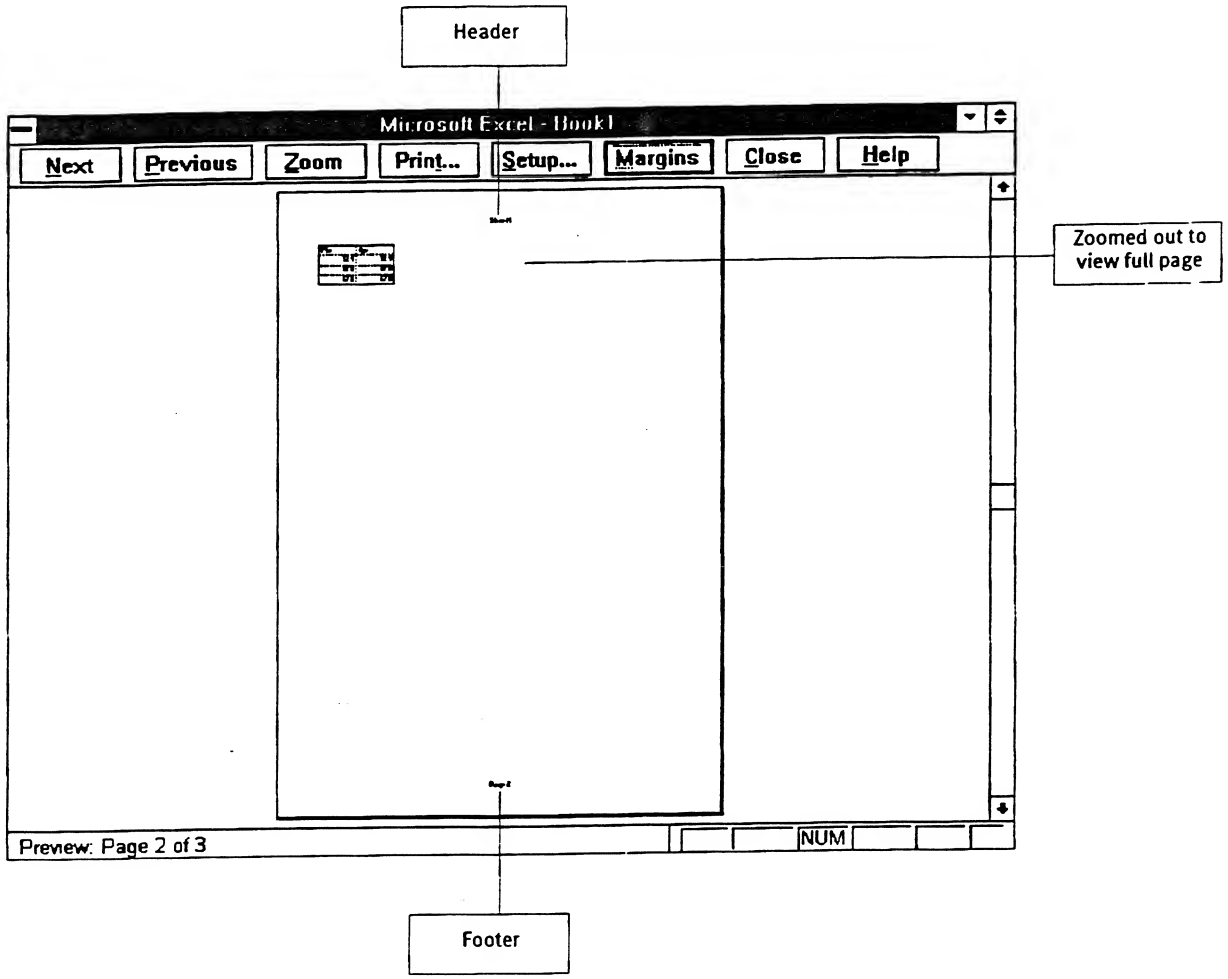
Previewing a Document

Although Excel shows a very similar view to the printed spreadsheet, it is always advisable to preview before printing. The preview screen presents the user with *WYSIWYG* (*W*hat *Y*ou *S*ee *I*s *W*hat *Y*ou *G*et).

To Print Preview

Menu

1. Choose **File, Print Preview**



Only one page is shown at a time, the previous and next pages can be seen by selecting the **Next** and **Previous** buttons.

To Zoom In/Out of the Preview Screen

Mouse

1. Click on the required area

When the mouse pointer is positioned on the page it displays as a magnifying glass.

or

Click Zoom

Use the scroll bars to view a different area of the page.

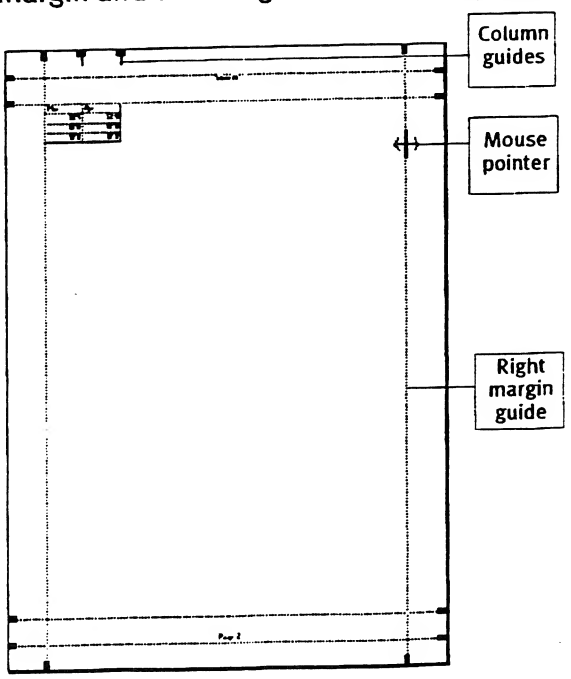
Note

To zoom out click anywhere on the page or choose the Zoom button.

To Change Column Widths and Margins in the Preview Screen

Mouse

1. Click Margins
2. Click and drag the margin and column guides to the required positions



The bottom left hand corner of the screen indicates the margin measurement in inches.

Note

To remove the guides click Margins

To Close the Preview Screen

Mouse

1. Click Close

Page Setup

Page Setup controls the appearance of printed sheets. It allows the user to change margins and the orientation of the page.

Options Available	Description
Page Tab	Allows the page orientation to change from landscape to portrait and vice versa. Scaling options are available allowing the spreadsheet to be enlarged or reduced to fit the page.
Margins Tab	Allows the margins to be set and the spreadsheet to be centred on a page vertically and/or horizontally.
Header/Footer Tab	Allows the user to specify the content of the header and footer and its position on the page.
Sheet Tab	Allows gridlines, row numbers and column letters to be printed.

To Change the Page Setup

Mouse

1. Choose **File, Page Setup**

   or

   From the preview screen click Setup...

2. Choose the required tab
3. Choose the required options
4. Choose **OK**

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To Fit the Spreadsheet on a Page

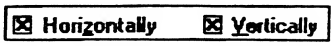
Menu

1. Choose **File, Page Setup**
2. Choose the **Page** tab
3. Choose

4. Choose **OK**

To Centre the Spreadsheet on a Page

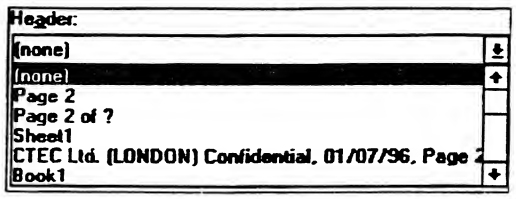
Menu

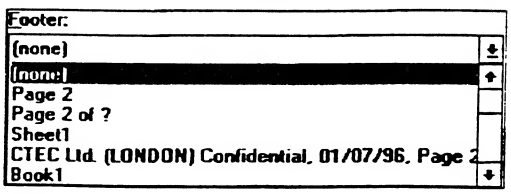
1. Choose **File, Page Setup**
2. Choose the **Margins** tab
3. Choose 

4. Choose **OK**

To Add Pre-defined Headers and Footers

Menu

1. Choose **File, Page Setup**
2. Choose the **Header/Footer** tab
3. Select a header from 

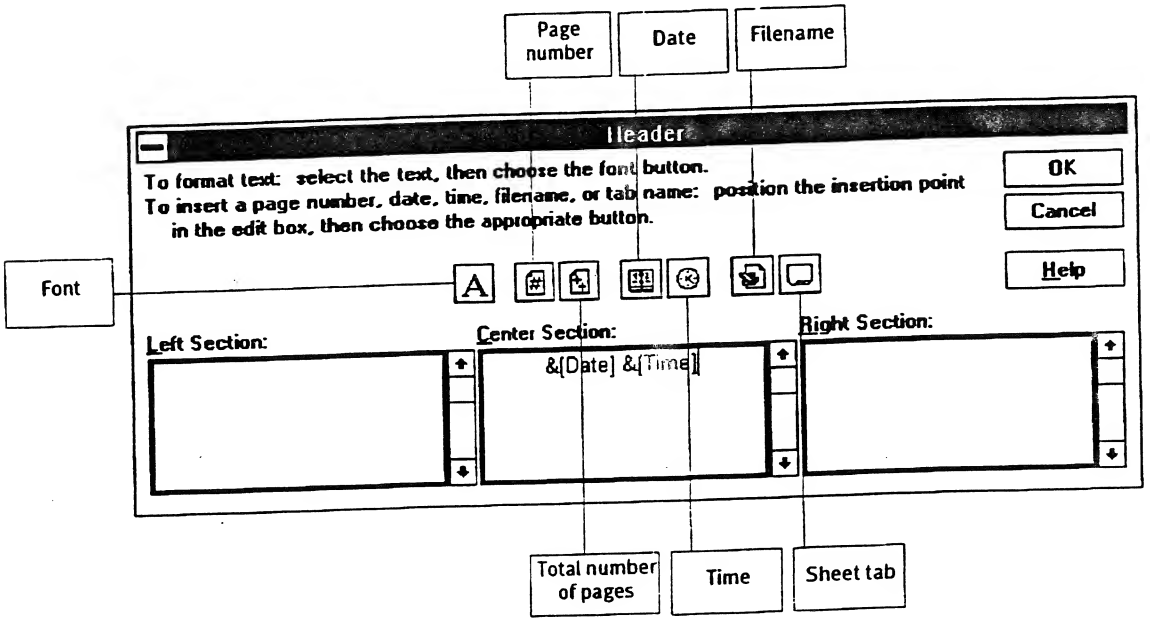
4. Select a footer from 

5. Choose **OK**

To Add Custom Headers

Menu

1. Choose **File, Page Setup**
2. Choose the **Header/Footer** tab
3. Choose Custom Header...
4. Type header required



5. Choose **OK**

To Add Custom Footers

Menu

1. Choose **File, Page Setup**
2. Choose the **Header/Footer** tab
3. Choose Custom Footer...
4. Type footer required
5. Choose **OK**

Defining Page Breaks

Excel inserts automatic *page breaks* where necessary, influenced by the margins and the width of individual columns. Automatic page breaks may be overridden and a manual break set.

☞ To Insert a Page Break

Menu

1. Select the entire column or row
2. Choose **Insert, Page Break**

A dotted line indicates the page break.

☞ To Remove a Page Break

Menu

1. Select the page break column or row
2. Choose **Insert, Remove Page Break**

Defining Titles

When work spreads over several pages, important headings on the first page are often missing from the remaining pages. To overcome this problem key rows and columns can be selected to be *Titles* which will print on every page.

To Create Titles

Menu

1. Choose **File, Page Setup**
2. Choose the **Sheet** tab
3. Choose **Rows to Repeat at Top**

   or

   Choose **Columns to Repeat at Left**
4. Select the rows or columns on the worksheet

A dotted line indicates the selection.

5. Choose **OK**

Note

This only applies for this worksheet. Titles for other worksheets will have to be specified individually.

To Remove Titles

Menu

1. Choose **File, Page Setup**
2. Choose the **Sheet** tab
3. Select the titles
4. Press **[Delete]**
5. Choose **OK**

Printing the Document

Excel can *print* the entire contents of the worksheet, workbook or just a selected area.

To Print the Document

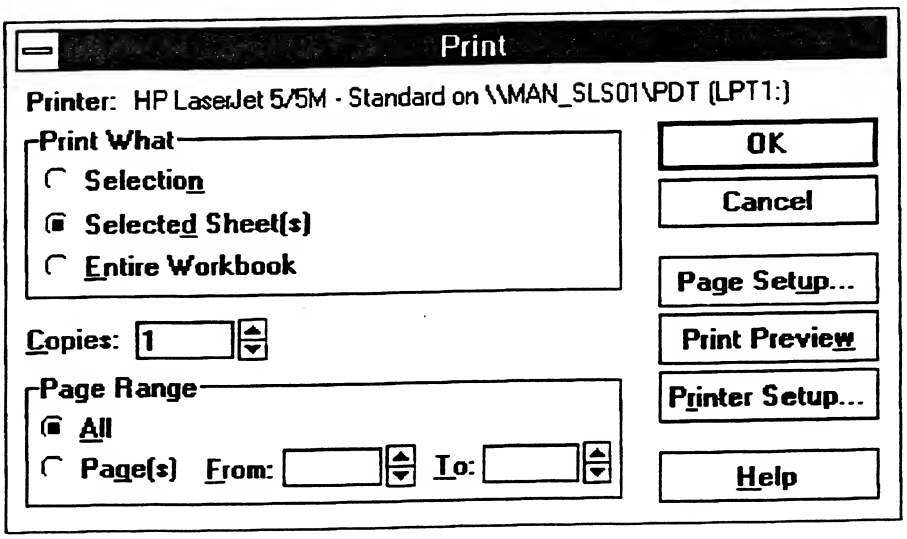
Menu

1. Choose **File, Print**

   or

   From the preview screen click Print...

2. Choose what to print, e.g. Selected sheet(s)
3. Choose the number of copies required, e.g. 3
4. Choose the page range, e.g. Page(s) from 1 to 3



5. Choose **OK**

Mouse

1. Click

Note

When using the Print icon from the Standard toolbar only the default settings are available.

Setting Print Areas

Users can specify a print range, known as a *Print Area.*

☞ **To Set a Print Area**

Menu

1. Choose **File, Page Setup**
2. Choose the **Sheet** tab
3. Choose **Print Area**
4. Select the area required on the worksheet

Dotted lines indicate the print area.

5. Choose **OK**

Note

If multiple areas are set (using the **[Ctrl]** key), Excel prints the first selected area on the first page, the second area on the second page and so on.

☞ **To Remove a Print Area**

Menu

1. Choose **File, Page Setup**
2. Choose the **Sheet** tab
3. Select the print area
4. Press **[Delete]**
5. Choose **OK**

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Notes

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Chapter 10
Using the Worksheet Efficiently

Topics

The following covered in this chapter:

- ✓ Naming Cells
- ✓ Creating Cell Notes
- ✓ Splitting a Worksheet Window into Panes
- ✓ Protecting Worksheets

Naming Cells

Instead of referring to cell references in formulae and functions, cells may be given a *name* and the name can then be used in the formulae. There are two choices when naming cells, either to create a name (used if the name required is already on the spreadsheet) or to define a name (used if the name required is not on the spreadsheet).

To Create a Name

Menu

1. Select the name and the adjacent cells to be named
2. Choose **Insert, Name, Create**
3. Choose which row or column from the selected range holds the name, e.g. Left Column
4. Choose **OK**

To Define a Name

Menu

1. Select the range to name
2. Choose **Insert, Name, Define**
3. Type a name
4. Choose **OK**

Note

A name may already be in the Define Name dialogue box. This suggestion may be replaced by simply typing a different name.

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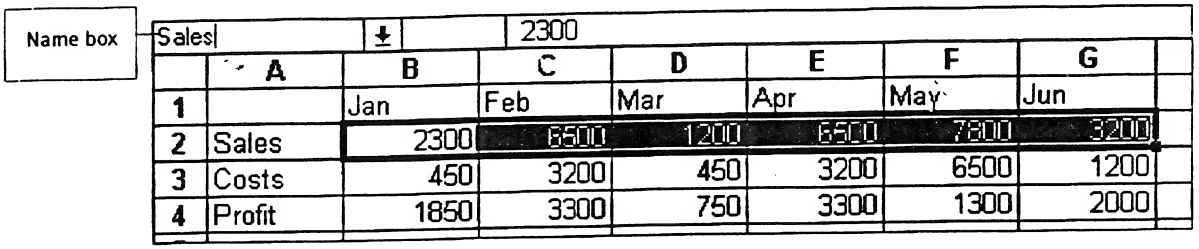
Mouse

1. Select the required cells
2. Click in the Name Box
3. Type a name



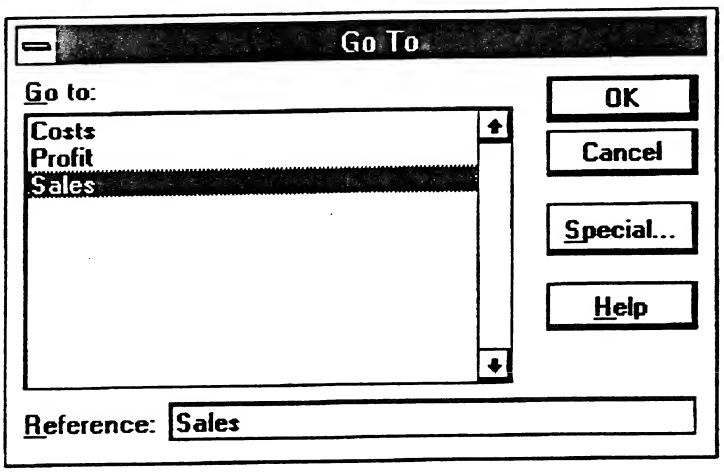
	A	B	C	D	E	F	G
1		Jan	Feb	Mar	Apr	May	Jun
2	Sales	2300	6500	1200	6500	7800	3200
3	Costs	450	3200	450	3200	6500	1200
4	Profit	1850	3300	750	3300	1300	2000

4. Press **[Return]**

To Goto a Named Range

Menu

1. Choose **Edit, Goto**
2. Select the required name



3. Choose **OK**

Mouse

1. Click the drop arrow to the right of the Name Box
2. Select the required name

Excel now highlights the range.

To Use a Range Name in a Formulae

Mouse

1. Select the cell where the answer is to go
2. Type = and the function required, e.g. =Average(
3. Type in the range name, e.g. Sales

   or

   Select the name from the Name Box
4. Type)
5. Press **[Return]**

Applying a Range Name

If a name is given to a range, and the range has already been referred to in a formula, then the cell references can be replaced with the name.

To Apply a Range Name

Menu

1. Choose **Insert, Name, Apply**
2. Choose the required name
3. Choose **OK**

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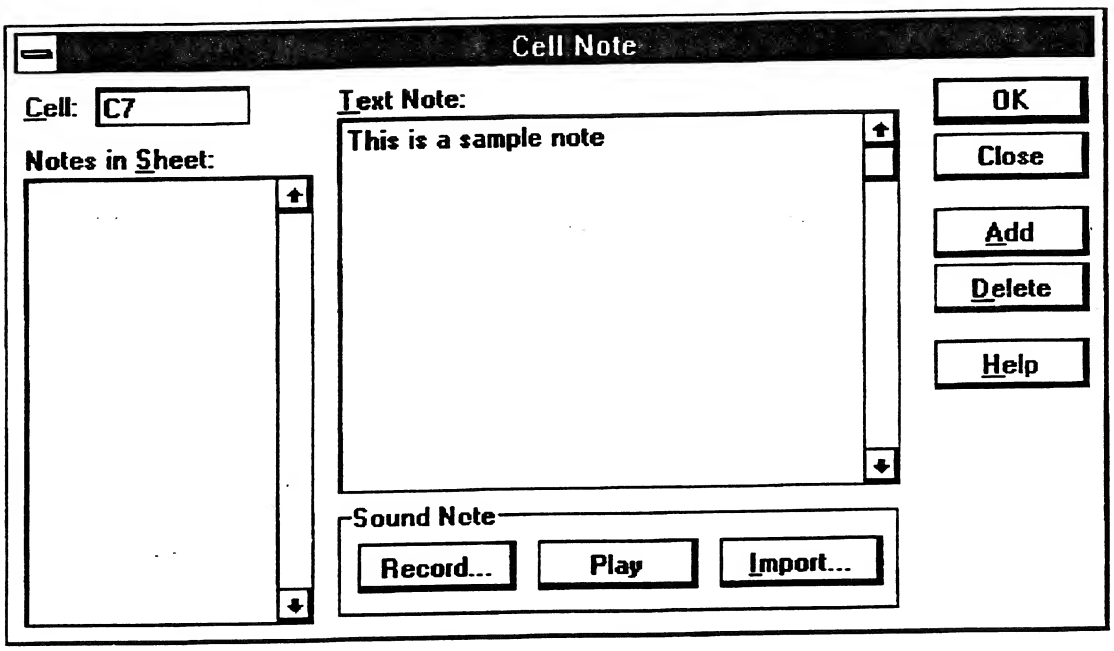
Creating Cell Notes

A *cell note* is a description or set of instructions attached to a cell to give the user more information. The notes may be printed out on a separate sheet with the worksheet if required.

To Create a Note

Menu

1. Select the cell to hold the note
2. Choose **Insert, Note**
3. Type the note



4. Choose **OK**

A red dot in the top right hand corner of the cell indicates that a note is attached.

To View or Edit a Note

Menu

1. Select the cell containing the note
2. Choose **Insert, Note**
3. Amend the note if required
4. Choose **OK**

Keyboard

1. Select the cell containing the note
2. Press **[Shift]+[F2]**
3. Amend the note if required
4. Choose **OK**

To Delete a Note

Insert Menu

1. Select the required cell
2. Choose **Insert, Note**
3. Select the note
4. Choose **Delete**

Confirmation is required.

5. Choose **OK**

Edit Menu

1. Select the required cell
2. Choose **Edit, Clear, Notes**

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Splitting a Worksheet Window into Panes

A worksheet window can be split into *panes*. Panes enable the user to view different areas of a large worksheet at the same time. A window can be split into two or four panes.

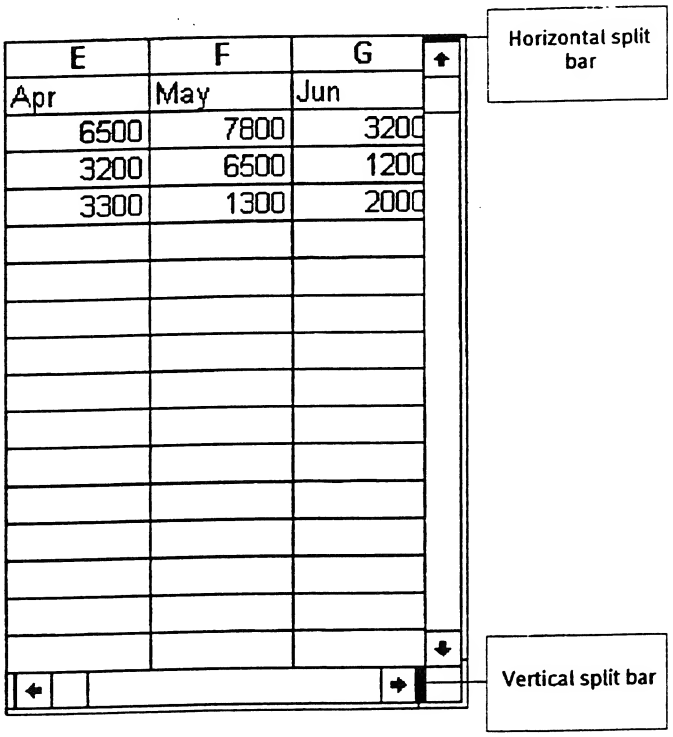
To Split a Worksheet into Panes

Menu

1. Select the cell to the right and below where the split is to go
2. Choose **Window, Split**

Mouse

1. Click and drag the split bars



To Remove a Split

Menu

1. Choose **Window, Remove Split**

Mouse

1. Double-click on the split bars

Freezing Panes

Panes can be *frozen* so that horizontal and vertical titles will remain on the screen as the user moves around the spreadsheet. The same part of the spreadsheet is not seen twice.

To Freeze Panes

Menu

1. Select the required row or column
2. Choose **Window, Freeze Panes**

To Unfreeze Panes

Menu

1. Choose **Window, Unfreeze Panes**

Note

When panes are frozen data may still be entered in all panes.

Protecting Worksheets

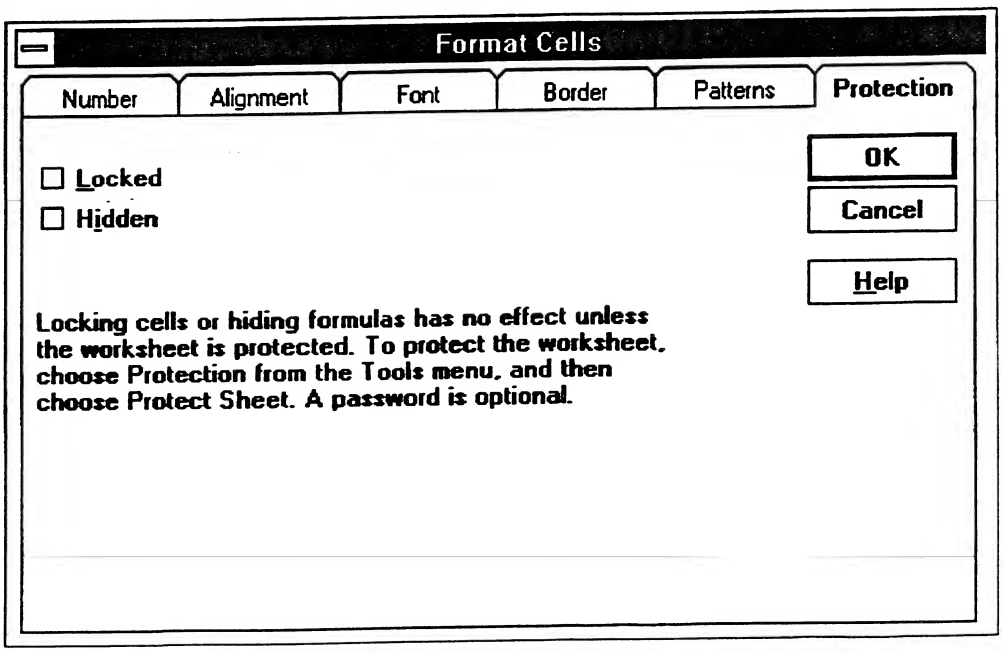
It is recommended that most of the cells on a worksheet should be *protected* against accidental change, especially those containing formulae. However, some cells will need to be edited. The first stage in protecting the worksheet is to set the protection status for the cells on the sheet.

By default, all cells on a spreadsheet are automatically *locked*, which means that when a worksheet is protected, every cell that is locked will be protected. Choosing to *unlock* specific cells allows changes to be made to those cells when the worksheet is protected.

To Unlock Cells

Menu

1. Select the cells to unlock
2. Choose **Format, Cells**
3. Choose the **Protection** tab
4. Choose **Locked** to unlock (unprotect) cells



5. Choose **OK**

Note

When cell protection is switched on nothing is protected until the worksheet is protected.

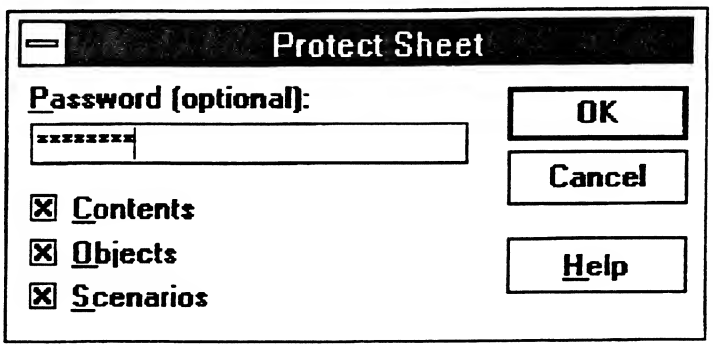
Worksheet Protection

Once all the cell protection has been determined, worksheet protection can be switched on.

To Protect a Worksheet

Menu

1. Choose **Tools, Protection, Protect Sheet**



A password may be used if required to stop other users turning off the protection. Users will need to confirm the password, A password can have a maximum of 255 characters and is case sensitive.

2. Choose **OK**

Note

Data can only be entered or edited in cells which are unlocked.

To Unprotect a Worksheet

Menu

1. Choose **Tools, Protection, Unprotect Sheet**

If the worksheet is protected with a password, the user must type the password in correctly to complete the process.

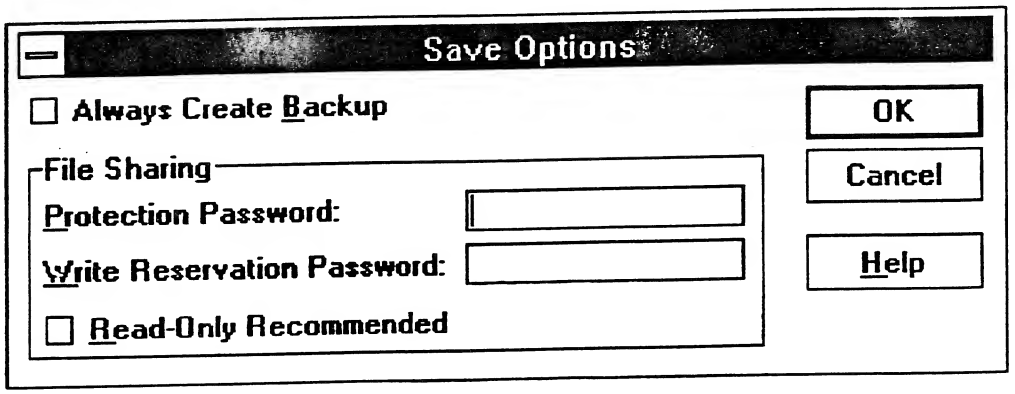
Attaching a Password to a File

To prevent unauthorised users opening or saving changes to a spreadsheet passwords can be assigned. There are two different types of passwords: *protection* and *write reservation*. Protection passwords must be entered in order to open the file. Write reservation passwords only need to be entered when changes are to be saved to a file. Anyone can open the file but cannot save it unless they know the password.

To Attach a Password

Menu

1. Choose **File, Save As**
2. Choose **Options**
3. Type a password



Each character will be represented as a * and the password is case sensitive.

4. Choose **OK**
5. Retype password
6. Choose **OK**

To Remove a Password

Menu

1. Choose **File, Save As**
2. Choose **Options**
3. Delete the password
4. Choose **OK**

Note

Be careful with passwords. If the password is forgotten the file cannot be opened again.

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Notes

Chapter 11
Working with Multiple Sheets and Files

C·T·E·C

Topics

The following are covered in this chapter:

- ✓ Working with Multiple Worksheets
- ✓ Creating Templates
- ✓ Working with Multiple Workbooks

Working with Multiple Worksheets

A workbook can contain between 1 and 255 worksheets. A workbook containing multiple worksheets has the following advantages over single sheet workbooks.

- data can be organised and formatted in a more flexible manner
- related data can be accessed more efficiently than if it is in separate files
- formulae can be created to consolidate multiple worksheets

Creating Multiple Worksheets

Additional worksheets can be inserted into a workbook. New worksheets are inserted before the selected worksheet.

To Insert Additional Worksheets

Menu

1. Choose **Insert, Worksheet**

   or

   Click the right mouse button on the sheet tab, choose **Insert, Worksheet, OK**

Each new sheet is assigned a sheet name, e.g. Sheet 17, Sheet 18, Sheet 19.

Naming Worksheets

Worksheets can be renamed, e.g. Sheet 1 renamed as Budget Plan. A sheet name can be up to 31 characters in length and can include spaces.

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To Rename a Worksheet

Menu

1. Choose **Format, Sheet, Rename**

   or

   Click the right mouse button on the sheet tab, choose **Rename**

2. Type name required

3. Choose **OK**

Mouse

1. Double-click on the sheet tab

2. Type name required

3. Choose **OK**

Deleting Worksheets

Entire worksheets can be deleted from a workbook.

To Delete a Worksheet

Menu

1. Select the required sheet

2. Choose **Edit, Delete Sheet**

   or

   Click the right mouse button on the sheet tab, choose **Delete**

Confirmation is required.

3. Choose **OK**

Note

Once a worksheet has been deleted, there is no going back, the undo facility will not be available.

Using Group Mode

When working in *Group Mode*, any commands issued or entries typed affect all sheets contained in that group. Multiple worksheets can be inserted and deleted using group mode.

To Switch On Group Mode

Mouse

1. Select the first worksheet tab to be included in the group
2. Press **[Shift]** + click on the last worksheet tab to be included in the group

The Title bar will now display the word **[Group]**.

Note

If insert and delete commands are issued, the number of sheets inserted or deleted will depend on the number of sheets in the group.

To Switch Off Group Mode

Mouse

1. Press **[Shift]** + click on the active sheet tab

   or

   Click any sheet tab that is not in the group

Note

Always ensure that group mode is switched off after use, otherwise any actions performed on one sheet will also be performed on all other sheets within the group.

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Cut, Copy and Paste Between Worksheets

Data can be cut or copied from one worksheet and pasted onto another sheet. Data can also be copied to more than one worksheet using group mode.

To Move Data Between Worksheets

Menu

1. Select data
2. Choose **Edit, Cut**
3. Move to the first cell where the data is to be pasted
4. Choose **Edit, Paste**

Mouse

1. Select data
2. Click
3. Move to the first cell where the data is to be pasted
4. Click

To Copy Data Between Worksheets

Menu

1. Select data
2. Choose **Edit, Copy**
3. Move to the first cell where the data is to be pasted
4. Choose **Edit, Paste**

To Copy Data Between Multiple Worksheets

Menu

1. Select data
2. Choose **Edit, Copy**
3. Move to the first cell where the data is to be pasted
4. Press **[Shift]** + click on the last worksheet tab where data is to be pasted

Group mode is now switched on.

5. Choose **Edit, Paste**
6. Press **[Esc]** to deselect the copy range

Note

Remember to switch off group mode, otherwise any actions performed on one sheet will also be performed on all other sheets within the group.

Changing the Workbook Structure

Users can re-arrange the order in which sheets are placed in a workbook to reflect the way in which they want to work. Users may also want to adjust the structure of their workbook if inserted sheets are in the wrong place.

To Move a Worksheet within a Workbook

Menu

1. Click the right mouse button on the sheet tab, choose **Move or Copy**
2. Select the new location
3. Choose **OK**

Mouse

1. Click and drag the sheet tab to the new location
2. Release the mouse

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To Copy a Worksheet within a Workbook

Menu

1. Click the right mouse button on the sheet tab, choose **Move or Copy**
2. Select the new location
3. Choose **Create a Copy**
4. Choose **OK**

Mouse

1. Press **[Ctrl]** + click and drag the sheet tab to the new location
2. Release the mouse

Linking Worksheets Together

Separate worksheets can be linked together using formulae. This ensures that changes to be made in one worksheet are immediately reflected in the linked worksheet(s). Linked formulae can be copied to other cells in the normal way.

To Link Sheets

Mouse

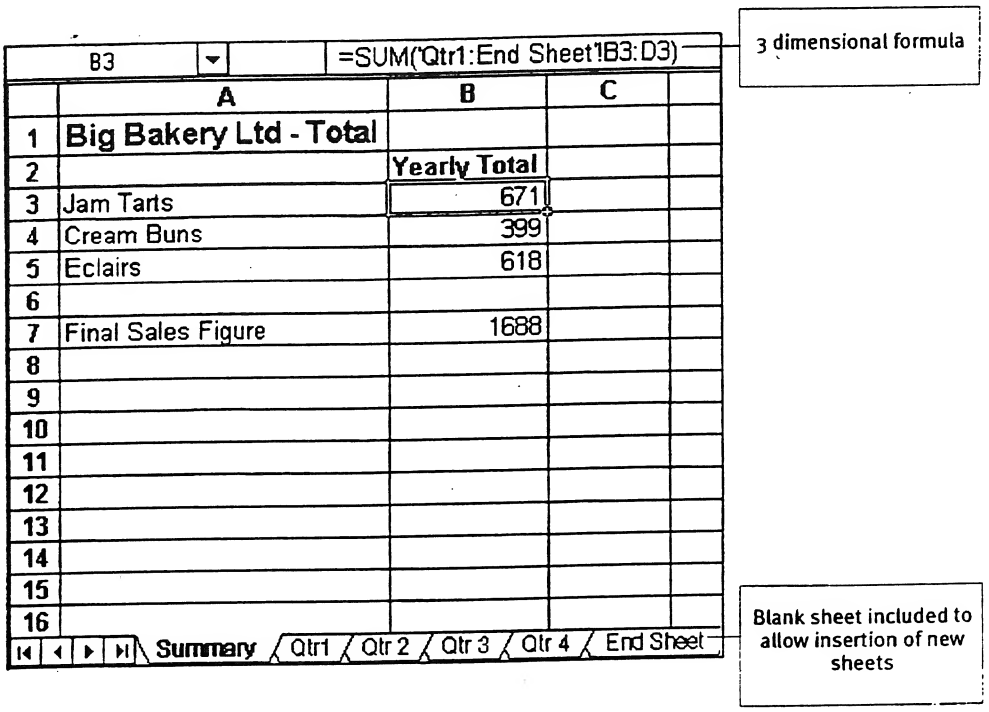
1. Select the answer cell
2. Type **=**
3. Select the sheet with value to include
4. Select the cell to include
5. Type an arithmetic operator, e.g. +
6. Repeat steps 3 to 5 until formula is complete
7. Press **[Return]**

Note

If multiple ranges are to be specified in a formula, e.g. sum, average, the ranges are separated by commas.

Creating 3 Dimensional Formulae

Any command or function which requires a range to be defined may include a *3D Range*. A 3D range is a range that spans two or more sheets in a file. The cell references of a 3D range include the sheet names of the first and last worksheets in the range and the cell references in the respective sheets.



To Create a 3D Formula

Mouse

1. Create the required formula, e.g. =Sum(
2. Select the cells in the first sheet to be included in the formula range
3. Press **[Shift]** and click the worksheet tab of the last sheet to be included in the formula range
4. Complete the formula as required, e.g. close the bracket and press **[Return]**

Note

Any sheets inserted within the range will update the formulae if data is positioned in the correct cells. Moving worksheets outside the range specified removes them from the 3D formulae. It can be beneficial to include a blank sheet at the end of the workbook that is included within the formula to ensure any new worksheet inserted will be included in any 3D formula.

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Creating Templates

If a spreadsheet style is used frequently, a template can be created to save time. Normally the template will contain standard text, formulae and formatting. A template can be used when creating a new workbook or alternatively, by saving the template in the XLSTART directory, the user can subsequently insert it into an existing workbook.

To Create a Template

Menu

1. Create the workbook in the normal way
2. Choose **File, Save As**
3. Type a name
4. Choose **Template** as the Save File as Type

If required, choose the XLSTART directory.

5. Choose **OK**
6. Choose **File, Close**

Note

When saving a workbook as a template Excel will retain the number of sheets in the workbook, e.g. if there are 16 sheets in the workbook there will be 16 sheets in the template. If necessary, sheets can be deleted from the workbook before saving the template.

To Use a Template

Menu

1. Choose **File, Open**
2. Choose the required template
3. Choose **OK**

A copy of the template is displayed as a new workbook.

Note

If the template was saved as Month then the new workbook displays as Month1. Each time the template is used, the number will increase by one, e.g. Month2, Month3 and so on.

To Edit a Template

Menu

1. Choose **File, Open**
2. Choose the required template
3. Press **[Shift]** + choose **OK**
4. Amend the template
5. Choose **File, Save**
6. Choose **File, Close**

Inserting a Template

If a template has been saved in the XLSTART directory, the template can be inserted into an existing workbook. The template will be inserted before the selected sheet.

To Insert a Template

Menu

1. Click the right mouse button on the sheet tab, choose **Insert**
2. Select the required template
3. Choose **OK**

All the sheets in the template are now inserted into the current workbook.

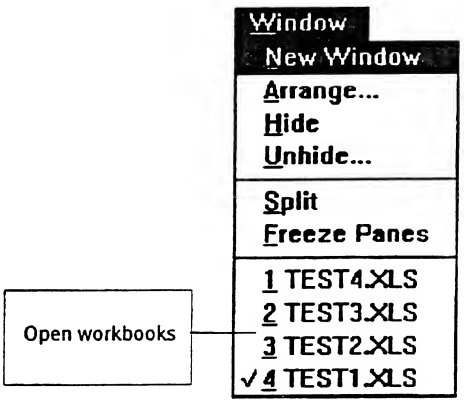
Working with Multiple Workbooks

It is not necessary to close one workbook down before opening another. Users may have as many workbooks open as their machine's memory can cope with. As more workbooks are opened Excel may become slower.

To View Any Open Workbooks

Menu

1. Choose **Window**



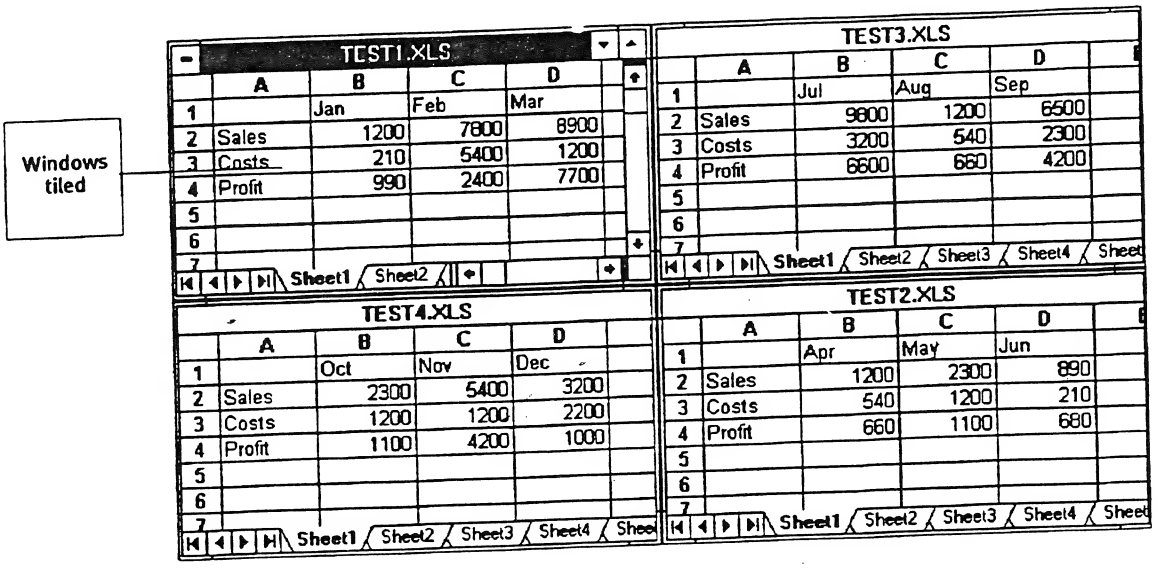
2. Select the required workbook

The selected workbook will be placed on top of the current workbook.

To View All Open Workbooks

Menu

1. Choose **Window, Arrange**
2. Choose the view required, e.g. Tiled
3. Choose **OK**



To Move Between Arranged Workbooks

Mouse

1. Click in the required workbook window

Menu

1. Choose **Window**
2. Select the required workbook

Keyboard

1. Press **[Ctrl]+[F6]**

Continue pressing **[Ctrl]+[F6]** to toggle between open workbooks.

To Close All Workbooks

Menu

1. Press and hold the **[Shift]** key
2. Choose **File, Close All**

To Move a Workbook Window

Mouse

1. Click and drag the Title bar to a new location
2. Release the mouse

To Size a Workbook Window

Mouse

1. Position the mouse on the window edge

The mouse pointer changes to a double arrow.

2. Click and drag to required size

Moving and Copying Between Workbooks

Data can be copied or moved from one workbook and placed in another using the cut, copy and paste procedure. When moving or copying from one workbook to another, it is easier if the workbooks are arranged on screen, e.g. tiled. Cut, copy and paste procedures between workbooks are performed in the same way as cut, copy and paste between worksheets.

Linking Workbooks Together

Separate workbooks can be linked together through formulae, so that changes made in one workbook are immediately reflected in the linked workbook.

To Link Workbooks Together

Menu

1. Open the required files
2. Arrange files on screen, e.g. Tiled
3. Select the answer cell
4. Type =
5. Select the required window
6. Select the cell to be included in the formula
7. Type in arithmetic operator, e.g. +
8. Repeat steps 5 to 7 until formula complete
9. Press **[Return]**

Note

If multiple ranges are to be specified in a formula, e.g. sum, average, the ranges are separated by commas.

Opening a Linked Workbook

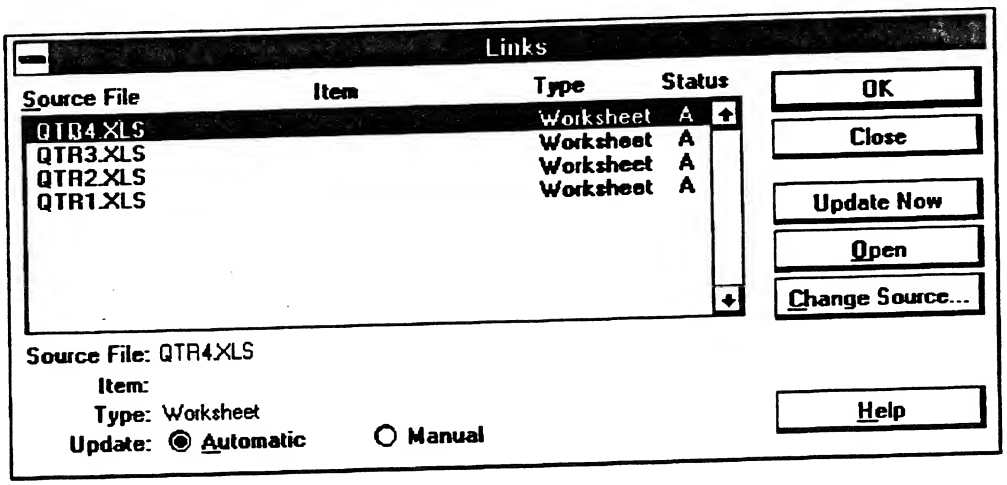
When a workbook is opened that contains links to other workbooks, Excel prompts for links to be updated. This allows the user to choose whether changes made in the linked workbooks should be reflected in the workbook containing the link formulae. If Yes is chosen then the links will be updated, if No is chosen the links will not update and the workbook will display as it was last saved.

Links can be updated at any time, not only when the workbook is first opened. The links option can also be used to open all the related workbooks.

To Update Links

Menu

1. Choose **Edit, Links**



2. Select the required workbook(s) for the dialogue box

3. Choose **Update Now**

To Open Linked Files

Menu

1. Choose **Edit, Links**
2. Select the required workbook(s)
3. Choose **Open**

Saving a Workspace

A workspace contains the settings of the workbooks currently open, including their size, arrangement, and position on the screen. Saving a workspace file allows a group of workbooks to be opened in one quick step.

To Save a Workspace

Menu

1. Choose **File, Save Workspace**
2. Type a unique filename
3. Choose **OK**

To Open a Workspace

Menu

1. Choose **File, Open**
2. Select the appropriate workspace filename
3. Choose **OK**

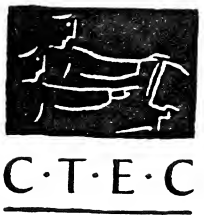
All workbooks previously saved in the workspace are now open.

Mouse

1. Click
2. Follow steps 2 and 3 as menu method

Notes

Chapter 12
Producing Charts



Topics

The following are covered in this chapter:

- ✓ Creating an Embedded Chart
- ✓ Creating a Chart on a Separate Sheet
- ✓ Formatting the Chart
- ✓ Changing the 3-D View
- ✓ Using the Drawing Tools
- ✓ Editing Objects

Creating an Embedded Chart

A *chart* is produced from the data on a worksheet. If the data is altered, the chart will be updated to accommodate the new figures.

Using the ChartWizard

The *ChartWizard* allows users to quickly create a chart using a series of steps which determine the attributes the chart should have.

To Create a Chart Using ChartWizard

Mouse

1. Select data

This should include all data to display on the chart.

2. Click

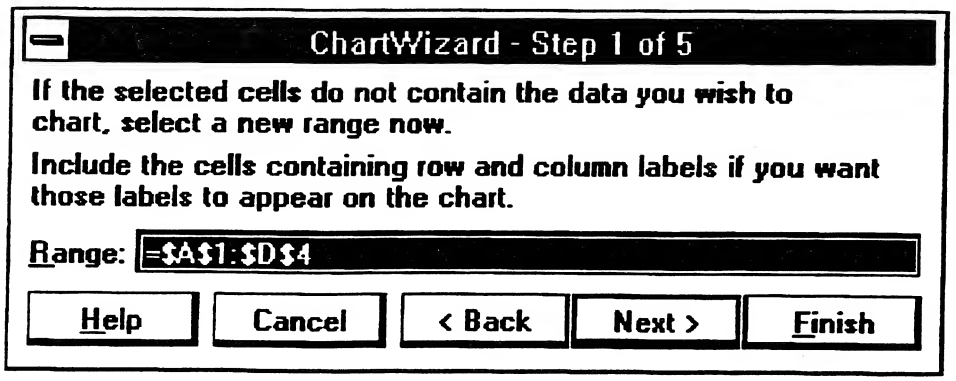
3. Click and drag over the area the chart is to appear in

To align the chart with the spreadsheet gridlines press **[Alt]** whilst dragging.

To keep the chart in proportion press **[Shift]** whilst dragging.

4. Release the mouse

A 5 step process now has to be completed.


ChartWizard - Step 1 of 5
If the selected cells do not contain the data you wish to chart, select a new range now.
Include the cells containing row and column labels if you want those labels to appear on the chart.
Range: =$A$1:$D$4
Help
Cancel
< Back
Next >
Finish

5. Choose **Next** to confirm the selected range

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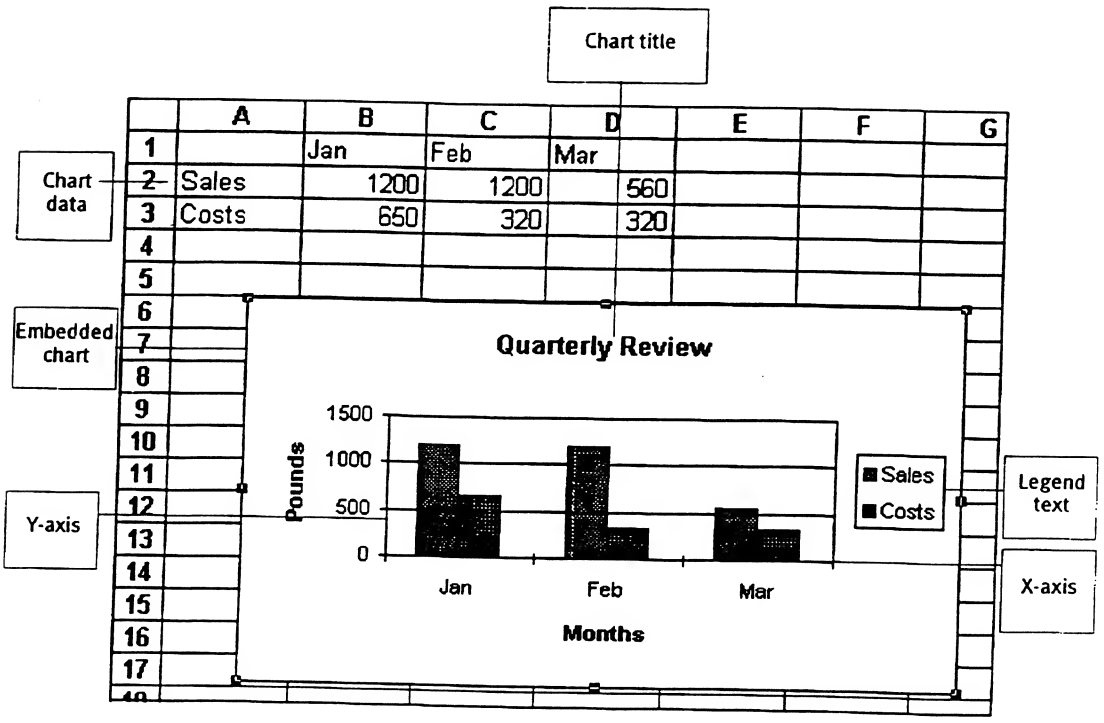
6. Choose a chart type
7. Choose **Next**
8. Choose a chart format
9. Choose **Next**
10. Choose the way in which the data series should display, e.g. Rows
11. Choose which rows/columns to use as the x-axis labels
12. Choose which rows/columns to use for the legend text
13. Choose **Next**
14. Choose **Yes** to display a legend

    or

    Choose **No** to omit a legend
15. Type the required chart title
16. Type the required axis titles
17. Choose **Finish**



Moving, Sizing and Deleting an Embedded Chart

A chart may be moved to a different location on the spreadsheet and resized if required.

To Move a Chart

Mouse

1. Select the chart
2. Position the mouse in the centre of the chart
3. Click and drag to new location
4. Release the mouse

To Size a Chart

Mouse

1. Select the chart
2. Position the mouse on one of the sizing handles

The mouse pointer changes to a double arrow.

3. Click and drag to re-size

To keep the chart in proportion press **[Shift]** whilst dragging.

To Delete an Embedded Chart

Keyboard

1. Select the chart
2. Press **[Delete]**

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Saving an Embedded Chart

The chart is saved as part of the spreadsheet.

To Save a Chart

Menu

1. Choose **File, Save**

Mouse

1. Click

Creating a Chart on a Separate Sheet

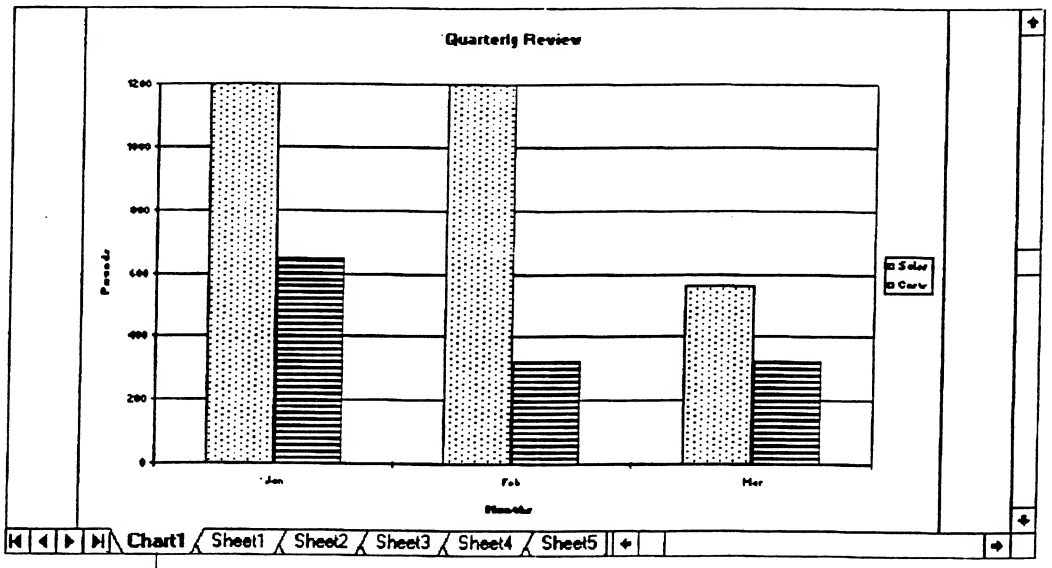
A chart can be drawn on a separate sheet if required. The chart is placed on a new sheet called Chart1, which can be moved and renamed like any other sheet in a workbook.

To Create a Chart on a Separate Sheet

Menu

1. Select the data
2. Choose **Insert, Chart, As New Sheet**

Follow the 5 step ChartWizard process in the normal way.



Note

The Menu bar in the chart sheet is different to the Menu bar in the worksheet.

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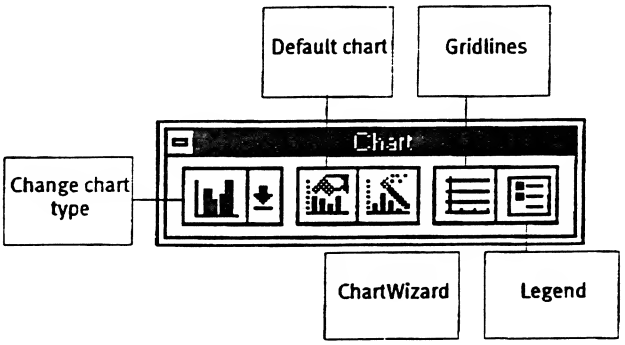
Formatting the Chart

When formatting a chart the user can change the chart style, attach features such as a legend, titles, arrows, and change the appearance of any part of the graph. When formatting a chart the menu or the *Chart toolbar* can be used. Before changing any chart items the user must be in *Chart Edit Mode*. when the chart has been created on a separate chart sheet, chart edit mode is automatically activated.

☞ **To Access the Chart Toolbar**

Menu

1. Click the right mouse button on any toolbar currently displayed, e.g. Standard
2. Choose **Chart**



☞ **To Switch On Chart Edit Mode**

Mouse

1. Double-click on the chart

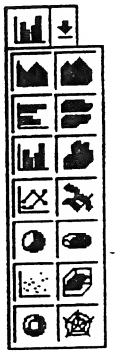
An outline will display around the chart.

Changing the Chart Type

During the chart creation process a chart type is defined, e.g. Column chart. This can be changed subsequently.

To Change the Chart Type

Mouse

1. Click 

2. Choose the required chart type

Menu

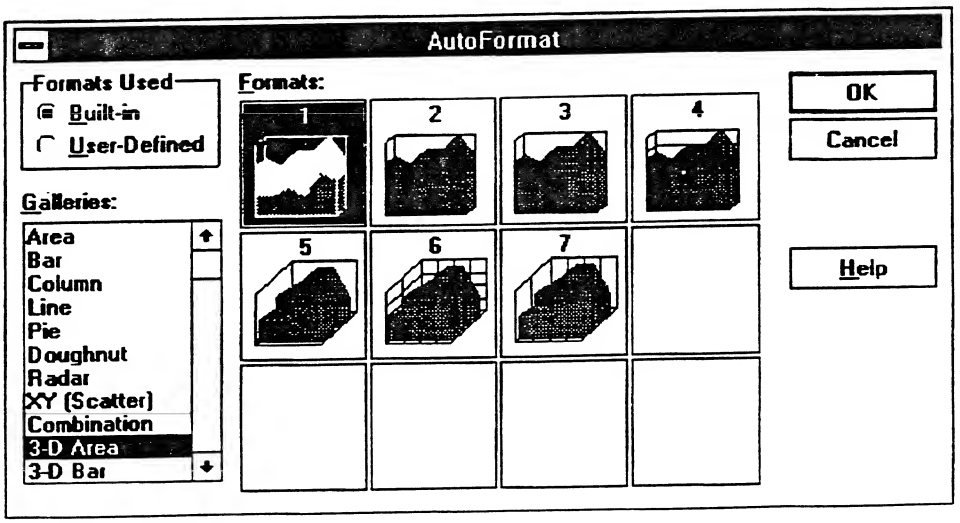
1. Choose **Format, Autoformat**

   or

   Click the right mouse button in the centre of chart, choose **Autoformat**

2. Choose the required chart type, e.g. 3-D Area

3. Choose the required chart format



4. Choose **OK**

Adding Text

Additional information can be added to the chart such as *titles*, which are pieces of text that label specific areas on the chart. Floating text can also be added to a chart. As the name suggests, these pieces of text may be positioned anywhere on the chart.

To Add Titles

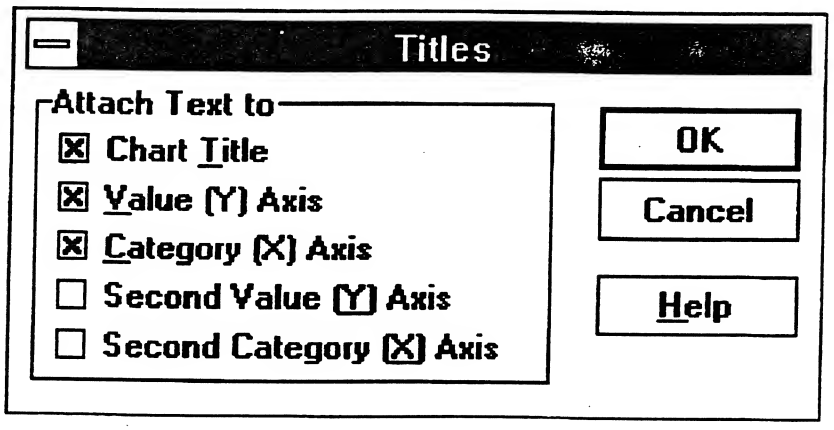
Menu

1. Choose **Insert, Titles**

   or

   Click the right mouse button in the centre of the chart, choose **Insert Titles**

2. Choose the required title(s), e.g. Chart Title



3. Choose **OK**

A highlighted box appears on the chart to indicate the position of the text.

4. Type the required text

5. Press **[Return]**

To Add Floating Text

Keyboard

1. Type text

Before typing ensure that no other text on the chart is selected.

2. Press **[Return]**

3. Click and drag text to required location

Note

When black handles display on any item, including text, that item can be moved and/or resized.

To Remove Text

Keyboard

1. Select text

2. Press **[Delete]**

Menu

1. Select text

2. Choose **Edit, Clear All**

   or

   Click the right mouse button on the text, choose **Clear**

Note

If the wrong text is deleted, the Undo feature can be used to restore the text.

Adding a Legend

A *legend* is the key to the chart. The text to display as legend text must be selected in the original range during chart creation in order for the legend to be created automatically.

To Add a Legend

Mouse

1. Click

Menu

1. Choose **Insert, Legend**

The legend can be moved to any position by selecting and dragging it.

To Remove a Legend

Mouse

1. Click

Keyboard

1. Select legend
2. Press **[Delete]**

Adding Gridlines

Horizontal and vertical *gridlines* may be added to a chart.

To Add Gridlines

Menu

1. Choose **Insert, Gridlines**

   or

   Click the right mouse button in the centre of the chart, choose **Insert Gridlines**

2. Select the required gridlines
3. Choose **OK**

Mouse

1. Click

This method only adds major horizontal gridlines.

Formatting Objects

Once all the information has been added to the chart, the appearance of the chart may be customised in the same way as formatting cells on the spreadsheet. In order to modify an item it must first be selected.

☞ **To Format an Object**

Menu

1. Select the object
2. Choose **Format, Selected 'Object'**, e.g. Selected Data Series

   or

   Click the right mouse button on the object, choose **Format 'Object'**, e.g. Format Data Series
3. Choose the required tab
4. Choose the formats required
5. Choose **OK**

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Changing the 3-D View

A three dimensional graph may need to be *tilted* or *rotated* in order to display all of the information clearly.

To Change the 3-D View

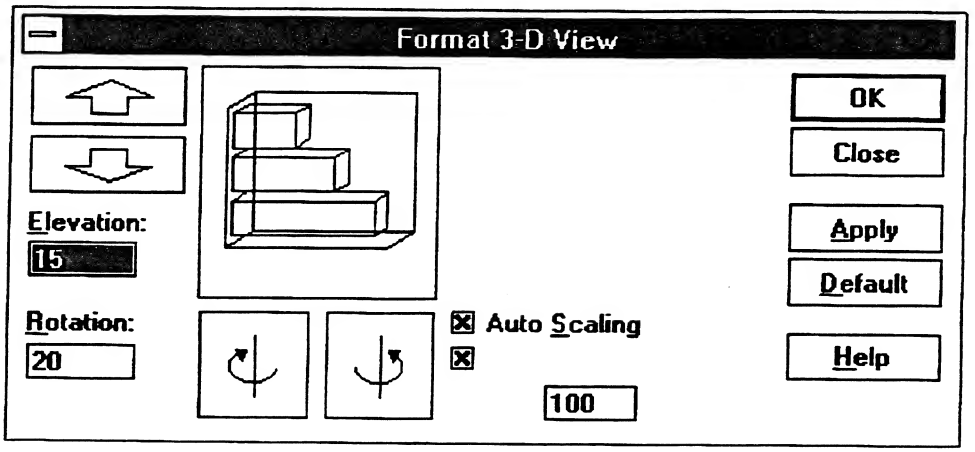
Menu

1. Choose **Format, 3-D View**

   or

   Click the right mouse button in the centre of the chart, choose **3-D View**

2. Choose the required formats

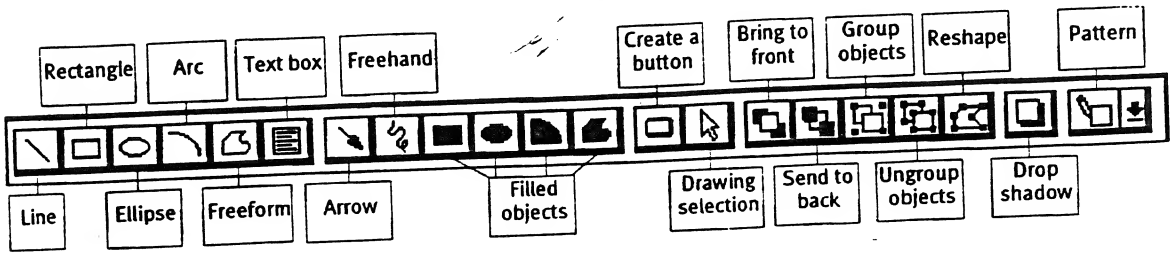


3. Choose **OK**

Using the Drawing Tools

Many objects can be added to the spreadsheet or chart in order to emphasise the contents.

The objects are added and edited using the *Drawing toolbar.*



☞ **To Draw an Object**

Mouse

1. Click on the tool required
2. Click and drag over the area the object is to appear in

To align the object with the spreadsheet gridlines press **[Alt]** whilst dragging.

To keep the object in proportion press **[Shift]** whilst dragging.

3. Release the mouse

Editing Objects

The size, colour and style of all objects can be edited and the appearance of the object can also be changed.

Selecting Objects

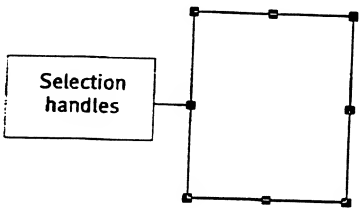
Before anything can be edited it must first be selected.

To Select an Object

Mouse

1. Click
2. Click on the object to select

Selection handles display around the edges of the object.



To Select a Group of Objects

Mouse

1. Click
2. Click on the first object
3. Hold the **[Shift]** key whilst clicking on the other objects required

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Sizing, Moving, Copying and Deleting Objects

Objects can be moved to a new location, copied to other locations, resized and deleted completely from a spreadsheet.

To Resize an Object

Mouse

1. Select the object
2. Point to one of the selection handles
3. Click and drag to resize the object
4. Release the mouse

Note

Holding down the **[Shift]** key whilst dragging will keep the object in proportion. Holding down the **[Ctrl]** key whilst dragging will size the object from the centre outwards.

To Move Objects

Mouse

1. Select the object(s)
2. Position the mouse over the object
3. Click and drag to new location
4. Release the mouse

To Copy Objects

Mouse

1. Select the object(s)
2. Position the mouse over the object
3. Press **[Ctrl]** + click and drag to new location
4. Release the mouse

To Delete Objects

Keyboard

1. Select the object(s)
2. Press **[Delete]**

Overlapping Objects

When objects are placed over each other, it is occasionally necessary to change the order in which they appear on the spreadsheet. Users can move objects to the front or back of a stack of objects using the *Bring To Front* and *Send To Back* functions.

To Bring an Object to the Front

Menu

1. Select the object
2. Click

To Send an Object to the Back

Mouse

1. Select the object
2. Click

Grouping Objects

Several individual objects can be combined or *grouped* so that they are treated as a single object. Should one object within the grouped object need to be edited, the grouped object has to be *ungrouped*.

To Group a Set of Objects

Mouse

1. Select the objects to be grouped
2. Click

To Ungroup Objects

Mouse

1. Select the grouped object
2. Click

Each of the items contained in the group will appear with selection handles around the edges.

Adding a Shadowed Effect to an Object

A *shadow* effect can be added to an object.

To Add a Shadow to an Object

Mouse

1. Select the object
2. Click

Adding Different Patterns

Different shading, colour and line styles may be applied to objects.

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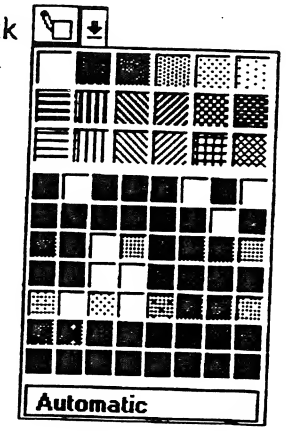
To Add Different Patterns

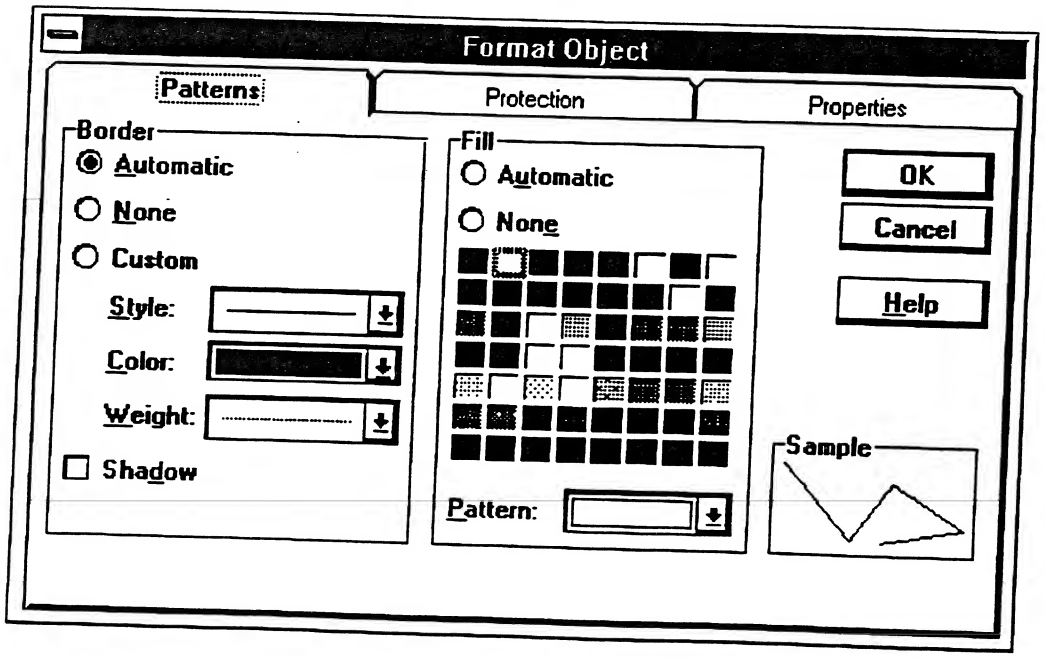
Mouse

1. Select the object
2. Click 

3. Choose the format required

Menu

1. Select the object
2. Choose **Format, Object**
3. Choose the **Patterns** tab



4. Select the formats required
5. Choose **OK**

Notes

Appendix A
Exercises

C·T·E·C

Exercises

The following are contained in this appendix:

- ✓ Data Entry, Basic Formula and Copying
- ✓ Using Statistical Functions
- ✓ Using Absolute Cell Referencing
- ✓ Building a Worksheet and Presentation
- ✓ Conditional Logic
- ✓ Creating a Template
- ✓ Using Templates
- ✓ Linking Workbooks
- ✓ Linking Worksheets
- ✓ Producing Charts

Data Entry, Basic Formula and Copying

Exercise 1

1. In a new workbook, enter the headings as shown below:

	A	B	C	D	E	F
1	Five Year Sales Summary					
2		1990/91	1991/92	1992/93	1993/94	1994/95
3	Sales					
4	Costs					
5	Profit					

2. Enter the following data as the sales figures from 1990/91 to 1994/95 respectively:

   1750 1500 2000 2500 3250

3. Enter a formula in B4 to calculate the costs for the year 1990/91, where the costs are 20% of the sales figure.

4. Enter a formula in B5 to calculate the corresponding profit figure, e.g. Sales - Costs.

5. Copy the formula in column B across to column F.

6. Save the workbook using **Summary** as the filename.

7. Close the workbook.

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Exercise 2

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D	E	F
1		Basic	Discount	Sale	VAT	Selling
2		Price		Price		Price
3	Chair	50				
4	Desk	250				
5	Shelves	130				
6	Table	680				
7	Stool	30				
8	Trolley	80				
9	Cabinet	600				
10	Sofa	1700				
11	Armchair	590				

2. In cell C3, enter a formula to calculate the discount on a chair at 10%, e.g. multiply the basic price by 10%.

3. Copy this formula down to C11 to obtain the discounts for the other items of furniture.

4. In cell D3, enter a formula to calculate the sale price of the chair, by subtracting the discount from the basic price.

5. Copy the formula down to D11 to obtain the sale prices for the other items of furniture.

6. In cell E3, enter a formula to calculate the VAT at 17.5% of the sale price of the chair.

7. Copy the formula down to E11 to complete the column.

8. In cell F3, enter a formula to calculate the retail price of the chair, by adding the VAT to the sale price.

9. Copy the formula down to F11.

10. Save the workbook using **Prices** as the filename.

11. Close the workbook.

Data Entry, Basic Formula and Copying

Exercise 1

1. In a new workbook, enter the headings as shown below:

	A	B	C	D	E	F
1	Five Year Sales Summary					
2		1990/91	1991/92	1992/93	1993/94	1994/95
3	Sales					
4	Costs					
5	Profit					

2. Enter the following data as the sales figures from 1990/91 to 1994/95 respectively:

   1750 1500 2000 2500 3250

3. Enter a formula in B4 to calculate the costs for the year 1990/91, where the costs are 20% of the sales figure.

4. Enter a formula in B5 to calculate the corresponding profit figure, e.g. Sales - Costs.

5. Copy the formula in column B across to column F.

6. Save the workbook using **Summary** as the filename.

7. Close the workbook.

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Exercise 2

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D	E	F
1		Basic	Discount	Sale	VAT	Selling
2		Price		Price		Price
3	Chair	50				
4	Desk	250				
5	Shelves	130				
6	Table	680				
7	Stool	30				
8	Trolley	80				
9	Cabinet	600				
10	Sofa	1700				
11	Armchair	590				

2. In cell C3, enter a formula to calculate the discount on a chair at 10%, e.g. multiply the basic price by 10%.

3. Copy this formula down to C11 to obtain the discounts for the other items of furniture.

4. In cell D3, enter a formula to calculate the sale price of the chair, by subtracting the discount from the basic price.

5. Copy the formula down to D11 to obtain the sale prices for the other items of furniture.

6. In cell E3, enter a formula to calculate the VAT at 17.5% of the sale price of the chair.

7. Copy the formula down to E11 to complete the column.

8. In cell F3, enter a formula to calculate the retail price of the chair, by adding the VAT to the sale price.

9. Copy the formula down to F11.

10. Save the workbook using **Prices** as the filename.

11. Close the workbook.

Using Statistical Functions

1. Open the workbook **Prices.**

2. Add the following headings and resize column A to fit as shown below:

	A	B	C	D	E	F
12						
13	Total Discount					
14	Maximum basic price					
15	Minimum basic price					
16	Average selling price					
17	No. of items					

3. Enter the relevant formulae into column B, e.g. the formula in B13 will be the sum of the discounts in column C, while the formula in B14 will be the maximum basic price in column B.

4. Resave the workbook.

5. Close the workbook.

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Using Absolute Cell Referencing

Exercise 1

1. In a new workbook enter the headings and figures as shown below:

	A	B	C	D	E	F	G
1		No. of	Peak	Std	Fixed	Cost of	Cost of
2		Lines	Units	Units	Charge	peak calls	std calls
3							
4	Reception	2	160	986			
5	Administration	4	700	456			
6	Sales	6	230	322			
7	Accounts	1	198	167			
8	Marketing	2	100	328			
9							
10	Total						
11							
12	Subscription per line	£25.00					
13	Peak-rate charge per unit	£0.40					
14	Std-rate per unit	£0.15					

2. Save the workbook using **Phone** as the filename.
3. In E4 calculate the fixed charge, e.g. No of lines * subscription per line.
4. Copy this formula down for the other departments.
5. In F4 calculate the cost of peak rate calls, e.g. peak units used * peak rate charge per unit.
6. Copy this formula down to calculate the cost of peak rate calls for the other departments.
7. In G4 calculate the cost of standard rate calls.
8. Copy this formula down for the other departments.
9. Enter a formula in B10 to calculate the total number of lines.
10. Copy this formula across to calculate the totals of the other columns.
11. Resave the workbook.
12. Close the workbook.

Exercise 2

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D
1	City	Barrels sold	Spent	% of Total
2		(millions)	(millions)	
3				
4	Belfast	1.7		
5	Cardiff	2.1		
6	Edinburgh	2.4		
7	London	5.2		
8	Newcastle	4.7		
9				
10	Total			
11				
12	Price per barrel			150

2. Enter a formulae, in C4, to calculate the amount spent in Belfast. Use the cell references for the number of barrels sold in the region and Price per barrel.

3. Copy the formula down for the other cities, paying attention to the absolute cell references required.

4. In B10, enter a formula, using the Autosum tool, to calculate the total number of barrels sold.

5. Copy the formula to C10 to calculate the total amount spent.

6. In D4, calculate what percentage of the total amount spent was spent in Belfast, e.g. amount spent in Belfast divided by the total amount spent.

7. Copy the formula down for the other cities, paying attention to the absolute cell references required.

8. Save the workbook using **Beer** as the filename.

9. Close the workbook.

Building a Worksheet and Presentation

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D	E	F	G	H
1	**Name**	**Gross**	**Monthly**	**Pension**	**Taxable**	**Income**	**National**	**Nett**
2		**Pay**	**Pay**	**Scheme**	**Pay**	**Tax**	**Insurance**	**Pay**
3				**3%**		**24%**	**9%**	
4	Abbott	10,000.00						
5	Fielding	14,000.00						
6	Kray	16,000.00						
7	Smith	14,500.00						
8	Harris	18,000.00						
9	James	13,500.00						
10	Kelly	11,000.00						
11	Smith	9,500.00						
12	Williams	25,000.00						
13	Thompson	14,000.00						
14	Smythe	35,000.00						
15								
16	**Total**							

2. Save the workbook using **Wages** as the filename.

3. Enter the following formulae and copy them down as far as the last name in the list, paying careful attention to any absolute cell references required.

   Monthly Pay = Gross Pay divided by 12

   Pension = Monthly Pay multiplied by D3

   Taxable Pay = Monthly Pay minus Pension

   Income Tax = Taxable pay multiplied by F3

   National Insurance = Monthly Pay multiplied by G3

   Nett Pay = Taxable Pay minus Income Tax minus National Insurance

4. Enter a Function to calculate the Total, and copy the formula across the row.

5. Resave the workbook.

6. Format the worksheet to display as above.

7. Resave the workbook.

8. Close the workbook.

Conditional Logic

Exercise 1

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D	E
1	**Name**	**Target**	**Sales**	**Commission**	**Assessment**
2	Kathy	14000	15000		
3	Sue	1000	8000		
4	Tom	18000	19000		
5	Mel	7000	65000		
6	Arnold	9000	12000		
7	Kim	12000	15000		
8	Craig	11000	2000		

2. Create a formula to enter the Commission in column D, based on the following:

   If a salesperson reaches target they are paid 2% of sales.
   If they do not reach target they are paid no commission.

3. Create a formula to enter the Assessment in column E, based on the following:

   If the commission earned is greater than £300 a performance assessment of "Good" is given, otherwise it is "Poor".

4. Save the workbook using **Target** as the filename.

5. Close the workbook.

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Exercise 2

1. In a new workbook, enter the headings and figures as shown below:

	A	B	C	D	E	F
1	**Assumptions**					
2	Initial Sales	5000				
3	Fixed Costs	3000				
4	Unit Costs	45%				
5	Growth Rate	15%				
6	Inflation Rate	4%				
7						
8	**Projection**					
9		Year 1	Year 2	Year 3	Year 4	Year 5
10	Sales					
11	Material Costs					
12	Overhead Costs					
13	Fixed Costs					
14	Gross Profit					
15	Tax at 30%					
16	Net Profit					

2. In cell B10, enter a formula to copy the first year sales figure from the assumptions area.

3. In cell C10, enter a formula to increase the previous year's figure by the growth rate. Copy this formula across to generate the remaining sales figures.

   Year 2 Sales = Year 1 Sales + Year 1 Sales * Growth Rate

4. In cell B11, enter a formula to calculate the material costs as a percentage of the sales use unit cost percentage. Copy across for all years.

5. In cell B12 calculate the overhead costs using conditional logic, if sales are greater than or equal to £7000, overhead costs are 10% of sales, otherwise overhead costs are 5% of sales. Copy across to complete the row.

6. In B13 enter a formula to copy the fixed costs figure from the assumptions area. In cell C13, enter a formula to increase the previous year's figure by the inflation rate. Copy this formula across to generate the remaining fixed cost figures.

7. Calculate the gross profits by subtracting all the costs from the sales.

8. Tax at 30% is calculated on all profits over zero. Use conditional logic to calculate the amount of tax paid each year.

9. Enter a formula that will calculate the net profit, by subtracting the tax from the gross profits. Copy this across.

10. Save the workbook using **Growth** as the filename, and close it.

Creating a Template

1. In a new workbook, enter the headings and apply formatting as shown below:

	A	B
1	**Big Bakery Ltd**	
2		
3	**Items**	**No. Sold**
4	Eclairs	
5	Jam Tarts	
6	Cream Buns	
7		
8	Total Sales	

2. In B8 enter a formula to calculate the total number of items sold.
3. Save as a Template using **Cakesale** as the filename.
4. Close the workbook.

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Using Templates

1. Close all open files.

2. Create a new workbook based on the **Cakesale** template.

3. Alter the title to Big Bakery Ltd - London, and add in the number of cakes sold as shown below:

	A	B
1	**Big Bakery Ltd - London**	
2		
3	**Items**	**No. Sold**
4	Eclairs	8
5	Jam Tarts	10
6	Cream Buns	12
7		
8	Total Sales	30

4. Save the workbook using **London** as the filename, do not close the workbook.

5. Repeat steps 2 to 4 for the Glasgow shop with the following alternations:

	A	B
1	**Big Bakery Ltd - Glasgow**	
2		
3	**Items**	**No. Sold**
4	Eclairs	5
5	Jam Tarts	10
6	Cream Buns	15
7		
8	Total Sales	30

6. Save the workbook using **Glasgow** as the filename, do not close the workbook.

7. Repeat steps 2 to 4 for the Manchester shop with the following alterations:

	A	B
1	**Big Bakery Ltd - Manchester**	
2		
3	**Items**	**No. Sold**
4	Eclairs	9
5	Jam Tarts	12
6	Cream Buns	15
7		
8	Total Sales	36

8. Save the workbook using **Manc** as the filename, do not close the workbook.

9. Create a new workbook and enter the data as shown below:

	A	B	C	D	E
1	**Big Bakery Ltd Regional Sales**				
2					
3		London	Glasgow	Manchester	Total
4	Sales				
5					

10. Save the workbook using **CakeSum** as the filename, do not close the workbook.

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Linking Workbooks

1. Using the Window menu check that the following workbooks are open:

   London.xls
   Glasgow.xls
   Manc.xls
   CakeSum.xls

2. Tile the windows to see all four workbooks.

3. Copy the number sold in the three shops to the summary sheet using linking formulae.

4. Enter a formula in column E to calculate total number of the various cakes sold.

5. Resave the summary sheet.

6. Change the number of Eclairs sold in Glasgow to 50 and observe the summary file.

7. Resave and close all the workbooks.

8. Open **Manc**, change the number of jam tarts to 99, resave and close the workbook.

9. Open **CakeSum**, update links and observe the alterations.

10. Open the linked workbooks using the Edit menu and tile the four workbooks.

11. Save the workspace using **Bakery** as the filename.

12. Close all the files and open the **Bakery** workspace.

Linking Worksheets

1. Create a new workbook.
2. Group Sheet1 to Sheet3.
3. Enter data and apply formats as shown below:

	A	B	C	D	E
1	**SALES FIGURES**				
2	**PET**	**Jan**	**Feb**	**Mar**	
3					
4	Hamster				
5	Rabbit				
6	Guinea Pig				
7	Goldfish				
8	Kitten				
9					
10	**Totals**				
11					

4. Ungroup the three sheets.
5. In Sheet1 enter figures and amend the heading as shown below:

	A	B	C	D	E
1	**SALES FIGURES - LONDON**				
2	**PET**	**Jan**	**Feb**	**Mar**	
3					
4	Hamster	32	36	27	
5	Rabbit	20	22	22	
6	Guinea Pig	19	23	15	
7	Goldfish	48	53	39	
8	Kitten	3	4	2	
9					
10	**Totals**	122	138	105	
11					

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6. In Sheet2 enter figures and amend the heading as shown below:

	A	B	C	D	E
1	SALES FIGURES - MANCHESTER				
2	PET	Jan	Feb	Mar	
3					
4	Hamster	23	42	21	
5	Rabbit	18	21	2	
6	Guinea Pig	30	23	13	
7	Goldfish	19	20	34	
8	Kitten	3	4	1	
9					
10	Totals	93	110	71	
11					

7. In Sheet3 enter figures and amend the heading as shown below:

	A	B	C	D	E
1	SALES FIGURES - BRISTOL				
2	PET	Jan	Feb	Mar	
3					
4	Hamster	24	22	31	
5	Rabbit	14	13	12	
6	Guinea Pig	9	8	7	
7	Goldfish	32	32	28	
8	Kitten	1	2	2	
9					
10	Totals	80	77	80	
11					

8. In Sheet4 enter the data and apply formats as shown below:

	A	B	C	D	E
1	PET	Jan	Feb	Mar	
2					
3	London				
4	Bristol				
5	Manchester				
6					
7	Totals				
8					

9. In Sheet4 use a formula to show total sales for each month at each centre.

10. Go to Sheet3 and change the number of Hamsters sold to 50 and observe Sheet4.

11. Save the workbook using **PetShops** as the filename.

12. Rename each sheet tab as follows:

    Name Sheet1 - London
    Name Sheet 2 - Manchester
    Name Sheet 3 - Bristol
    Name Sheet 4 - Totals

13. Resave the workbook.

14. Close the workbook.

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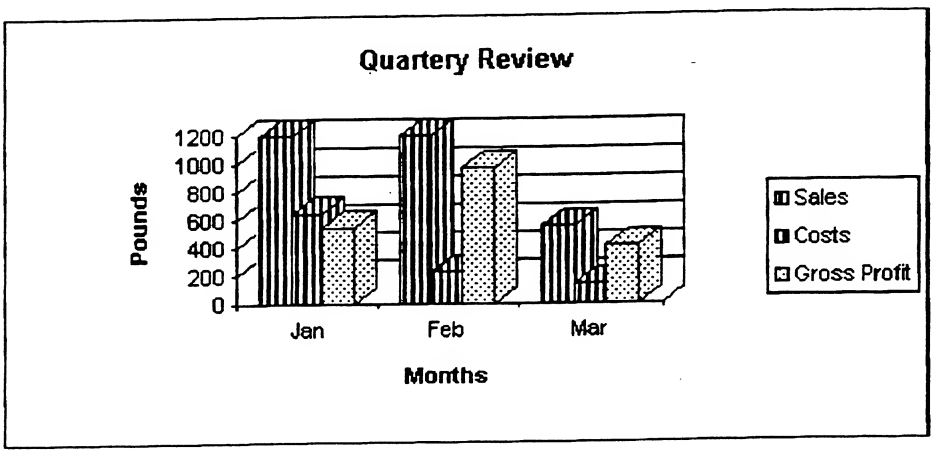
Producing Charts

1. Set up the worksheet as shown below:

	A	B	C	D
1		Jan	Feb	Mar
2	Sales	1200	1200	560
3	Costs	650	230	145
4	Gross Profit	550	970	415

2. Create the bar chart from the above data.



3. Change the figures in the worksheet.
4. Add formatting of your choice to the chart.
5. Save the workbook using **Quarter1** as the filename.
6. Close the workbook.